

THE NATIONAL PROVISIONER

PUBLISHED EVERY SATURDAY

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ENTERED AT NEW YORK AT SECOND-CLASS RATES.

Vol. XXX.

New York and Chicago, March 5, 1904.

No. 10.

NEW MILL AT ATLANTA.

The Procter & Gamble Company is planning the erection of a new cottonseed oil mill at Atlanta, Ga. The mill will have a daily capacity of 150 tons of seed, and will cost in the neighborhood of \$150,000. Work on the plant will commence in the spring.

SMALL MAINE ICE CROP.

The ice harvest in Maine has been completed, and the crop is estimated at 485,000 tons, one of the smallest ever gathered, in spite of the severe winter and consequent wealth of material. Last year's crop was 700,000 tons. The growth of the artificial ice-making industry and the cold winter in other sections is given as the cause for the marked falling off in the Maine crop.

SPRINGER BELIEVES IT.

Dispatches from Denver indicate that ex-president John W. Springer of the National Livestock Association is actually taking his vice-presidential boom seriously. He proposes to have a Roosevelt club of at least 1,000 members togged out in cowboy costume at the National Convention, and will try to carry the nomination with a whoop. He says that he is confident that the people of Illinois will come to his aid, owing to his family acquaintance in Central Illinois. A meeting of the Roosevelt Club will be held in Denver to perfect arrangements for capturing Chicago by storm.

SPITEFUL "PURE FOOD" CRUSADERS.

The waiters and cooks of a Lackawanna Railroad dining car were arrested at Scranton, Pa., last week on complaint of State Pure Food Commissioner Warren's agents, charged with serving oleo as butter on the diner. They were promptly discharged by the Scranton court on evidence which showed Commissioner Warren in a most unenviable light. The attorney for the railroad employees produced in court a letter from Dr. Warren asking for a pass over the Lackawanna. The pass was refused, and the statement was made that Dr. Warren immediately put his agents on the trail of the Lackawanna dining car service for purposes of revenge. A Warren agent testified that he bribed a waiter to give him samples of butter used in the car, and he found that that served on the table was genuine butter, while that used in the kitchen was oleomargarine. One was as healthy and wholesome as the other, and no patron has yet found fault with the Lackawanna dining car service, which is famous for its excellence.

ARMOUR BUYS LIPTON PLANT.

The Lipton plant at Chicago has been sold to Armour & Company. It is said that the price paid was in the neighborhood of \$250,000. The Lipton concern has been idle and closed for four months, and Sir Thomas Lipton has gradually closed out his Chicago packing interests. The Lipton plant is located next to the big Armour plant, and can be conveniently utilized.

MAY REPEAL GERMAN LAW.

The German meat exclusion bill has been referred to frequently of late in the Reichstag, and always as an agrarian measure. There has been no contradiction on this point, and it seems to be generally understood. Owing to the hardships this law has worked upon the masses, it would not surprise students of the situation if the law were repealed at no late day.

ANOTHER SWIFT ACQUISITION.

Sperry & Barnes, the big New Haven, Conn., meat firm, was last week incorporated under the name of the Sperry & Barnes Company. It also acquired the business of the Merwin Provision Co. It is understood the Swift interests are now in control of this company, it being one of the consolidations planned when Swift & Company increased their capital stock at the last annual meeting.

CUDAHY STRIKE STILL ON.

The strike of the butchers at the plant of the Louisville Packing Company is still on, with no prospect of settlement at an early date. The company has imported outside men, many of whom refused to work when they learned the situation. A sympathetic strike of the butchers at all the Cudahy plants in the country is threatened. The Louisville plant is protected from violence by a police guard night and day.

TAKE THE INDEPENDENT NAME.

The projected consolidation of several small packing concerns in St. Louis, including the Krey Dressed Beef Co. and the Gus Bischoff, Jr., Packing Co., has been consummated under the title of the Independent Packing Co., with a capital stock of \$150,000, of which it is stated \$80,000 is paid in. The incorporators and the number of shares of stock they own are as follows: James W. Garneau, 159 shares; F. H. W. Krenning, 750; Fred Krey, 126; Pierre A. Garneau, 125, and William Bischoff, 340.

STATE TO SELL FERTILIZERS.

A movement was begun at the recent session of the South Carolina Legislature to investigate the fertilizer situation and lay plans for the entrance of the State Government into the field as a dealer in fertilizers, just as it now deals in liquor. It is said such a bill will be submitted at the next Legislative session.

CANADIAN LIVE STOCK SHOW.

The first annual meeting of the National Association of Canadian Stock Breeders took place at Ottawa last week, and was very largely attended. There was a live stock exhibition, which was fairly representative of all provinces of the Dominion, and the event was said to have achieved beneficial results.

MARYLAND MEAT INSPECTION LAW.

A new meat inspection bill has been introduced in the Maryland legislature, similar to that which failed of passage two years ago. The bill makes the penalties for the sale of uninspected meats from \$100 to \$500, and authorizes the appointment of five inspectors by the Governor at \$150 per month salary.

STARTING UP SMALL PLANTS.

Kansas has a packinghouse fever on. No sooner does a large concern loom upon the horizon with packinghouse intent than a lot of smaller people imagine the coach of progress and prosperity is on the way; also that their particular locality is the heaven-designed place for a packing metropolis.

There was a bunch of "starters" at Leavenworth on the strength of a bonus plant going up there under the auspices of the Commercial Club upon the same basis as that signed by the City of Council Bluffs with the American Dressed Meat Company. It is this same company seeking the franchise at Leavenworth which stirred the local folk into some self-imposed abattoir activity. When the Dolds decided to rebuild in Wichita, Kan., a local packinghouse fever set in there. It subsided later on. Now a "farmers' movement" and other symptoms warm Topeka, where Lukens Bros. have made an actual start in a plant 18x20 ft. in size. This plant kills hogs only at present. Its future plans are bigger than the start. The surrounding farmers are trying to start some sort of co-operative plant or plants at that point.

Of course warm weather will shut down these little "independent" plants on Shunganunga creek and elsewhere. Whether the new concerns will do more than kill their own stock in the winter time remains to be seen.

AS GOOD AS THE BEST—"AND THEN SOME"

Northern Direct Current Apparatus possess all the characteristics of economical operation common to excellent electric motors and

Many exclusive meritorious features that make it worth your while to get acquainted with it by reading Bulletin No. 2235.

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SWISS LIBELS ON AMERICAN LARD

Ignorance dies hard, even in the enlightened republic of Switzerland. The incident here related, were it not aimed as a blow at American lard and based on total absence of truth, would be amusing at least.

The "Union Suisse des Paysans" has for its purpose the formation of a society whose duty it shall be to propose laws for the sanitary protection of the Swiss people against frauds and adulterations. It appears that extraordinary measures must be resorted to in order to disturb Swiss equanimity. It is not enough that misquotations are made in a "brochure published by the union," but medical and scientific opinions are fearfully mutilated as well.

As far back as February 26, 1898, The National Provisioner published a valuable and authoritative article on lards, to every word of which we still subscribe. By the proper, or improper, manipulation of facts and processes there given, by wrongly translating important words and phrases, and by further quoting medical nonsense, knowingly or otherwise, the Union succeeds in transforming our good American lard into nothing short of axle-grease—on paper, of course—before the eyes of a credulous people, constituted mostly of farmers.

According to this "brochure," choice lard is made in America by heating it to 200 deg. F., and adding permanganate of potash and sulphuric acid. This is quite a new process to us, and bears the distinction of being an absolute untruth when said to have appeared in The National Provisioner six

years ago. We admit that American methods are improving daily, and that we shall be content if the Swiss use this invention of theirs for their own lard, and let us render our lard without the use of any chemicals, as heretofore. Our modern packinghouses and rendering plants, which the Swiss might well adopt for their models, are provided with the best of refrigeration facilities, etc., and everybody here knows it. To reiterate the malicious Swiss story to the smallest boy on the rendering-kettle would throw him to the ground in a mixed fit of laughter and rage.

"Deodorized" is very serviceably translated into "décomposé." Comment on this is an insult on the American common sense. Nevertheless, such is the translation used to enlighten Swiss stubbornness.

That stearine and paraffine are entirely different substances, the former being a vegetable or animal and the latter a mineral derivative, is known to every American; not so to the educated Swiss gentleman who chanced to translate the article mentioned from The National Provisioner. That he must be totally ignorant of food valuation is shown by the statement that "cotton stearine is absolutely indigestible." This statement of his leads to the belief that he became rattled as to which is which, stearine or paraffine.

In his final statement the Swiss translator dolefully admits that against such methods there is no hope of competition left for the Swiss agriculturists.

DESTRUCTIVE TAX BILLS.

Reference was made recently in The National Provisioner to two bills introduced in the New York Assembly with no other evident purpose than the intention of harassing the packinghouse interests of the country by an ingenious and very probably unconstitutional method of multiple taxation. Since their introduction little has been heard of these measures, and they are presumably being allowed to lie dormant for the present for what is known in professional legislative parlance as "strike" purposes. Indeed, it is alleged in some quarters their introduction never had any other object in view.

The text of these two bills is reprinted here for the information of those interested. The amendments are enclosed in parenthesis. The first bill amends section 7 of the tax law to read as follows:

"Non-residents of the State doing business in the State, either as principals or partners, shall be taxed on the capital invested in such business, as personal property, at the place where such business is carried on, to the same extent as if they were residents of the State; (and where a corporation, whether foreign or domestic, which bears the same name as a foreign corporation, or a majority of the stock of which is owned by a foreign corporation or the stockholders thereof, acts as agent in this State for such foreign corporation in the sale of merchandise, slaughtered animals or the products thereof, or manufactured articles consigned to it by such foreign corporation, the foreign corporation consigning the merchandise, slaughtered animals or the products thereof, or manufactured articles, shall be taxed upon the capital invested in such business as personal property at the place where such business is carried on by the corporation acting as such agent, to the same extent as if they were residents of this State)."

The second measure amends section 13 to read as follows, the new portions being enclosed in parenthesis:

"A bond, mortgage, note, contract, account or other demand, belonging to any person not a resident of this State, sent to or deposited in this State for collection; the products of another State, owned by a non-resident of this State and consigned to his agent in this State for sale on commission for the benefit of the owner, (except where the agent to which such products are consigned is a corporation the majority of the stock of which is owned by the foreign corporation making the consignment or a stockholder or stockholders in such foreign corporation;) moneys of a non-resident of this State, under the control or in the possession of his agent in this State, when transmitted to such agent, (unless such agent is a corporation the majority of the stock of which is owned by the non-resident who transmits the moneys)."

RAILROADS PROMISE REFORM

The committee of the National Livestock Association had its conference in Chicago with the traffic officials of the western railroads last Saturday, and presented its case through Secretary C. F. Martin and others. The hardships to which stockmen have been subjected in the effort to get their cattle to market were related at length, and an array of facts put before the railroad officials that surprised them.

They promised to do all in their power to remedy conditions, and laid much of the trouble to lack of cars, bad weather, etc. It is said, however, that the root of the trouble is the operation of all these roads on the tonnage system, an economical device of the Eastern

directors whereby earnings and dividends may be increased. Under this system an engine must haul a maximum load, no matter what the delay, until that load is gathered. This system results in mixed freights and delays which the stockmen say cause immense damage to their perishable cargoes.

The question of return passes for shippers was also taken up, and the railroad men assured the stockraisers that some remedy would be devised. In the meantime the smaller organizations of cattle shippers and the live stock exchanges are maintaining the agitation and keeping records of all delays by the roads, so that suits may be brought later if necessary.

STEWART RIVALS BARBER RUEHL

During the discussion of the agricultural appropriation bill in the United States Senate last week Senator Stewart of Nevada secured the adoption of an amendment instructing the Secretary of Agriculture "to investigate the effect of cold storage upon the healthfulness of food."

The amendment was incorporated in the bill without objection on the part of any one. Cold storage is recognized as a necessary institution in the conserving of food supplies, and modern and scientific and healthful in its every feature. Indeed, the government is at this very moment arranging for the erection of a big refrigerating and cold storage plant of its own in Washington, and it has them at all its army posts and other government stations. Furthermore, what would happen to the health of the American troops in the Philippines were it not for the cold storage facilities for food at Manila and other ports?

It was not in the wording of the amendment, but in the remarks that accompanied its presentation, that the venerable statesman from Nevada betrayed an amazing ignorance (either real or pretended) of the commonest conditions that surround our daily living. The report says:

Mr. Stewart said that many cases of poisoning from cold storage food had been reported, and that often beef is kept for months, resulting in its serious deterioration.

Does the Senator desire to place himself on an intellectual level with the barber Assem-

blyman at Albany who made himself the laughing stock of the State by introducing a bill prohibiting the cold storage of provisions for a period longer than sixty days? Or having passed the age of threescore and ten, is he developing signs of senility? There is a third, and perhaps most plausible explanation: Has the Senator been inspired by some of the for-revenue-only pure food "reformers," who are stirring up all sorts of food agitation to advance their own and their friends' prospects for official sinecures?

No one will object to the most exhaustive sort of investigation on the part of the experts of the department of agriculture—unless it may be the taxpayers who have to foot the bills of the investigating bureau. The question of the utility—nay, the necessity—of cold storage in our food economy is not open to argument. The unwholesomeness and indigestibility of freshly slaughtered meat was long ago universally admitted. And so was the improvement in quality and palatability of refrigerated meat. Senator Stewart, who has been a member of the Washington "millionaires' club" for so many years that he ought to know something about good eating, would unquestionably be among the first to raise a howl over any meat set before him in the Senate restaurant that had not been through the refrigerating process he pretends to condemn.

Verily, the Senator's stomach should revolt at the thoughts his brain (or that of the lobbyist) conceiveth!

FLOATING MEAT WAREHOUSES

The magnitude of the frozen meat industry may be imagined when it is remembered that there is a fleet of 151 ships fitted with refrigerating machinery engaged in the trade between England, Australasia and the River Plate. Of these there are 10 monsters which can carry 110,000 to 130,000 carcasses of frozen mutton, each weighing 56 lbs., at one shipment. There are 17 ships which can carry 100,000 of these 56-lb. frozen carcasses of mutton at one load, and 36 of them that can ship cargoes of 74,000 to 90,000 carcasses at a time. A floating meat warehouse containing 7,280,000 lbs. of mutton is an important item on the bosom of the ocean. This provision fleet can carry at one loading over 9,000,000 carcasses of frozen mutton.

Such a vast amount of cold storage floating from the tropics is an item in the commerce of the world. It is a triumph for refrigeration. It would seem that these ships more than met the requirements of this trade. They do not seem to do so, however, inasmuch as a supplemental fleet of 10 more huge floating stores of the same kind are being rapidly fitted to be placed in this service. They have a capacity of from 7,000 to 95,000 carcasses each. Of this whole fleet of 161 ships only one is a sailing vessel, the Timaru, of New Zealand, with a hold capacity of 15,000 carcasses. She is one of the newly fitted craft and is an experiment.

This refrigerating fleet is divided as follows: 47 steamers, with a carcass capacity of 1,687,500 sheep, ply between Australia and England; 37 steamers, having a capacity of 3,083,500 carcasses, trade between England and New Zealand; 32 steamers, with a capacity of

1,290,500 carcasses, between the River Plate and the United Kingdom, and 35 steamers, having a capacity of 3,016,500 carcasses, between Australasia, the Cape, River Plate and the United Kingdom. The supplementary fleet will carry frozen meat in the same trade to Great Britain. These ships have a carcass capacity of 626,500 lambs.

The storage capacity of these ships is estimated in frozen carcasses of mutton, but it must not be supposed that they carry only that class of meat. The 56-lb. carcass of mutton is taken as the meat unit for estimating the haulage capacity. A very large percentage of these ships carry frozen beef. The growth and importance of the frozen meat industry can be seen from the fact that the capacity of the vessels has been gradually increased from 4,000 carcasses to 130,000 carcasses, at a single load. It was left to Australasia to bring over sea cold storage to its present state of perfection

THE PUBLIC AND PURE FOOD LAWS.

The present epidemic of activity on the part of pure food cranks and pure food office-holders in the enforcement of State pure food laws, so-called, does not appear to have aroused public interest commensurate to the amount of labor and pains suffered by the faddists in their endeavor to "reform" American food tastes. This seems to be a source of much real grief to the reformers, but the public continues to prefer its own judgment and tastes in food selection.

"It is a good sign," comments the Merchants' Review, "when the American people shy at

many of the kinds of law turned out by their State Legislatures, and perhaps most of all when it is a food law that is scorned and trodden into the dust. Who demands all these food laws? Though it is easy to point out pure food bills framed for the sole purpose of making an office for somebody, as well as pure food bills of a 'strike' character, intended to enrich some ambitious young legislator, we never remember seeing or hearing of a pure food bill that had the public weal for its sole object. Which perhaps partly explains the public contempt of law—it certainly explains the great production of statutes. If public interest only were studied, it stands to reason that the number of laws would have been much smaller than it is at present, but when every interest except the public's is studied the laws are naturally many and—also naturally—more or less wasteful of time and energy, even if they are not vicious and destructive."

In commenting on The National Provisioner's defense of borax as a preservative, in connection with Dr. Wiley's Government experiments, this same editorial commenter says: "If the conclusions do not support this view of the wholesomeness of borax it will probably go hard with the entire investigation in popular esteem, for people who know much about the subject will more readily suspect the vigilance or skill of the investigators than the wholesomeness of the well known preservative. It is not the boron compounds that are suspected, but the formaldehyde and the salicylic acid. These are the chemicals as to which the public would like to be enlightened, if it is within the power of the Agricultural Department to do so. It is to be hoped that the investigations will not cease with the cessation of active work on the pure food bill, notwithstanding that they have admirably served to advertise the bill and pave the way to its passage."

GERMAN INTEREST IN AMERICA.

The recent marked increased interest among intelligent people of Germany in the institutions, industrial conditions, and history of the United States is worthy of note, says United States Consul Harris, of Mannheim, Germany. This increase has manifested itself in a variety of ways. There has been, for example, a considerable array of new and well-written German Books on purely American topics. These books are found in all the leading book stores, and have been widely sold and commented upon. German newspapers and periodicals have published within the past year an unusually large number of letters describing travels in the United States, and leading articles on educational, industrial and other topics. This increase of interest in the United States is doubtless due to several causes, among which was the visit of Prince Henry of Prussia and the cordial feelings which the visit aroused on both sides of the water. The now general, if perhaps somewhat belated, recognition that the United States is a world power has undoubtedly given new incentive to the study of its natural growth. While it would not be expected that all who write on American topics as seen from the German standpoint would fully agree, or that the conclusions reached would all be favorable, the general tone has been friendly and appreciative.

RUSSIA'S ARMY MEAT PROBLEM

Food is a vital matter in war. The quick movement of armies requires more dead than live meat. Cattle walk too slowly for rapid marches and forced mobilization. In the olden days, when armies moved like ponderous entities in a long-winded general plan it did not much matter whether the bovine herd leisurely grazed his way along at a pasture gait, as the column moved only about eight miles a day. Then it took years to wear out an enemy.

Rapid-fire guns, rapid-action men and long-distance missiles have changed all of this, retired beef on four legs for beef in the can or other meats properly cured. The impromptu abattoir was always a menace to the health of the army. The carrion crow and the buzzard became hangers-on and scavengers for the camp which afflicted itself with fresh beef eaten the day it was killed. Dysentery came to such soldiers. To this was added the perils of decomposing entrails, hides and other offal which the scavenger buzzard was forced to leave undevoured about the camp. Modern nations know the handicap of the live beef diet. They prefer the healthier, handier, more compact cured or prepared ration. Quicker action and better results are had by the use of the dead ration for the moving army.

The Transportation Problem.

Take a view of Russia from this point. The average bovine will not dress 50 per cent. of his live weight. Russia is an average of over 4,000 miles from the seat of war. She has but one railway over which troops, armament and supplies must be shipped. Transportation is a big problem with the Czar's government. On a moderate ration it will take 100,000 cattle to supply the beef component of Russia's 300,000 men at the front for four months. It would take 6,000 cars traveling a month to transport this herd to Manchuria. These cattle would have to be fed and watered for that thirty days. That would entail the use of another 1,000 cars or more. This would have to be repeated every three or more months. The losses from cold or exhaustion would be very large. All this time more than half of the bulk weight carried would be both waste and a menace to health at the slaughter end of the journey. In less time, with half the car capacity and at less expense, Russia could ship the carcass meat of the same cattle to the Orient, save the hides and fats, besides utilizing the offal for purposes at home.

There is another view of the case: Russia can buy salt pork, salt beef, cured meats, and canned goods which are more condensed in form and longer keeping in quality at less cost than she can buy and kill her own cattle at home or along the line of the Siberian railway. Such a ration can be shipped in any kind of cars, without climatic risk and in less space than even the carcass stuff, because bone and the moisture have been largely extracted from the flesh. Thus the cured or prepared meat is about 33 per cent lighter than the fresh carcass. The canned condiment is about 75 per cent lighter than the beef on the hoof. That is, a 1,000-lb canning steer will produce about 45 per cent. of carcass beef. When this is stripped of its bone and the meat evaporated

in the process of canning there is left less than 250 lbs., tin and all, of meat weight. One trainload of this, then, would be equal to four trainloads of live cattle. It takes about 1½ lbs. of raw beef to fill a 1-lb. can of tinned beef. The loss in weight is moisture. Therefore, the soldier who humps 20 lbs. of canned meat in his pack is carrying the equivalent in nutriment of 30 lbs. of fresh beef of the same grade. So the matter of the preserved meat is not only one of staying quality. It is also one of economy in weight and convenience of package, as well as immediate use.

Enormous Number to Feed.

Russia threatens to put 500,000 men in the field before this war is over, and she may have to do so. She will have at least 300,000 men at the front. That number is accredited as being in China and Corea or on the way. Can she feed them? That is the question which interests the American packers. The early buying of American canned and other meats by Russia is an indication that the Czar's government will have to continue ordering food from this side. Russia has no surplus of livestock. She is credited with having 30,000,000 head of cattle in her European and Asiatic possessions. She also has 115,000,000 people there to feed on a peace footing. The fact that the country had to make such large calls upon America, even before war was declared and so soon thereafter, shows that the empire was not ready for war, on a war basis. Russia has very few hogs. The big flocks of sheep and goats in that country will not nearly equal the flocks of the United States. From her own flocks and herds Russia is unable to feed a large army in the Orient.

She is handicapped by another fact. As refrigerated or frozen meats and cured meats will pay the larger part in the food problem, the factory situation becomes a vital one. Japan, by sweeping the sea, has virtually cut off Australia and New Zealand meat supplies from reaching the Russian army by sea, unless a landing could be effected at some other point in Asia. The other available points are held by Japan's treaty ally, England, Russia's historical enemy. These meats would become expensive if first shipped to Europe. Then they would meet the transportation troubles which will affect all fresh meat which may be sent over the Trans-Siberian Railway.

Unprepared for the Emergency.

Russia is totally unprepared for the packing emergency which this war presents. She has comparatively few establishments which are modern, in a packinghouse sense. Those with which she is credited in Siberia and elsewhere on the road to the Orient are mere carcass slaughterhouses. In modern refrigeration the country is backward, very much so. The meats killed throughout the Russian Empire have been of the kind which were eaten fresh from the knife. Russia's abattoirs, with few municipal exceptions, are of the shambles order. Thus, the country is not in a position to properly refrigerate, can, cure and pack meat for service in the army ration.

Naturally the United States will be called upon more and more for mess pork and beef and for canned and cured meats. Even if Russia had the factories that country has not

the facilities for gathering in stock or for turning out stuff on short order and in such large quantities as the factories of the United States. Our railroads reach out to the great cattle herds and converge to the big packing centres. No other country in the world could perform half the feat of Chicago, Kansas City, Omaha, St. Joseph or St. Louis in treble the time, when it comes to mustering stock and putting up meat products. Russia is probably the least prepared of the great European nations to enter the list next to America. And she has fewer live meat pounds per head of her population than any of the nations named.

Meat Shortage in Europe.

There is a general meat deficiency in Europe. It has been upon this that the big American export meat trade has grown. The fact that Germany, France, Austro-Hungary, Switzerland, Sweden, Denmark, Holland and Belgium have only 58,000,000 head of cattle with which to feed 175,000,000 people is intimation enough that they can have no surplus for Russia in her present need. This is especially true since the countries named have comparatively few hogs. Mutton cuts a small figure in soldier-feeding in times of war. The fact that the United States have, roughly, 62,000,000 cattle and about 61,000,000 hogs to less than half of the combined population of the countries above named at once suggests who will be expected to largely feed the hungry Russian in camp in the East. The American meat factories are aware of the urgency which may be placed upon orders expected with spring. They are preparing for rush work, so that goods can go forward with the utmost dispatch. The stocks of canned goods are being augmented as fast as possible.

The inability of Russia to send any large amount of fresh or frozen carcass stuff by railway to China because of the lack of refrigerator cars, is known. That country has not hitherto felt the need of refrigerator cars. This exigency finds the Siberian railway unequipped for such a service. Cured pork and beef, however, may be sent in or on anything on railroad wheels. Even friendly France and Germany could not materially aid Russia in this respect, as both are backward in the refrigerator car line. You may scour Europe from center to circumference and not enough refrigerator cars could be found to send over through meat to feed the Russian army while the cars were on the road, much less until they could get back to Moscow or St. Petersburg and make the run out again. That is a dilemma. It is aggravated by the fact that there are no stations along the route to ice the cars in transit. This fact doubly necessitates a shipment of either live cattle or of such meats as will keep under all ordinary conditions.

What Meats Europe Took.

The fact that Russia has been contemplating the possibility of war for at least a year and has been quietly strengthening her base of supplies by shipments from this country may be seen from the increase of the exports to "other Europe" during 1903, as compared with 1902. "Other Europe" includes all shipments to that quarter except those to the United Kingdom, Belgium, France, Germany and the Netherlands for beef products and Italy for pork products. "Other Europe" as above named took from us meats as follows:

	1902. lbs.	1903. lbs.
Canned beef.....	487,000	936,000
Salted, packed and cured beef	2,320,000	4,015,000
Tallow	1,938,000	3,624,000
Bacon	4,625,000	7,777,000
Hams	1,498,000	2,445,000
Salted and pickled pork..	4,857,000	11,791,000

Total16,125,000 30,588,000

There has thus been an increase of 14,463,000 lbs. That is, the quantities have nearly doubled. Since January 1 of this year the export orders have very largely increased for the above products. The figures point the persistent truth that Russia feels her home inability either to furnish the raw material or to pack the needed army supplies. She also recognizes the fact that American food is both healthful and necessary for her commissary stores. The figures above quoted do not represent all of the American goods bought by Russia, inasmuch as immense quantities which were shipped to England and stored there for general purposes of trade have been largely taken up by Russian agents who went to the British Isles in quest of army stores. A great deal was sold here to the Czar's agents who were early on American soil looking for army meats.

Russia's food predicament is America's business opportunity, and our industries will feel the stimulus of that coming trade.

INVENTOR OF FROZEN MEAT.

British meat journals are disputing the origination of meat refrigeration. The British Australasian claims that James Harrison, a veteran journalist of Victoria, conceived the idea in the early sixties, erected expensive refrigerating works, and in the end was "financially ruined by the unfavorable and unsympathetic conditions of his time." In the sister and rival state, New South Wales, the late T. S. Mort, of Sydney, is generally regarded as the pioneer. He was a wealthy wool king, and is said to have spent no less than £80,000 on preliminary experiments before his first cargo of frozen meat was delivered in London.

A NEW OPENING CAN.

One of the features of the canning season will be a new key-opening device of an improved and practical character, which is about to be put on the market. It will be introduced through the medium of one of the largest sardine interests in the country, which will use the new device on its standard grade quarter oils. If matters develop as present conditions appear to indicate, the new package should prove a strong factor in the can situation, and be of considerable interest to those who prefer a key-opener to the ordinary can.

LIVERPOOL STOCKS.

	March 1.	Feb. 1.
Bacon, boxes.....	16,600	15,500
Hams, boxes.....	6,000	5,400
Shoulders, boxes.....	1,900	1,600
Cheese, boxes.....	99,400	104,000
Butter, cwts.....	7,000	11,600
Lard, tierces.....	5,200	4,000
Lard, other kinds, tons...	2,610	1,630

STOCK OF PROVISIONS

Following are the reports of stocks of provisions on hand at various centers at the close of business on February 29, 1904, compared with those a year previous:

CHICAGO

Following were the stocks of provisions on hand in Chicago at the close of business February 29, as reported to the Board of Trade:

	Feb. 29, 1904.	Feb. 28, 1903.
M. Pork, new, made since Oct. 1, 1903, bbls.	38,969	26,438
M. Pork, made Oct. 1, 1902, to Oct. 1, 1903	2	1,720
Other kinds barreled pork, bbls.	31,302	36,111
P. S. Lard, made since Oct. 1, 1903, tcs.	58,324	12,293
Other kinds lard....	21,419	12,012
S. R. middles, made since Oct. 1, 1903, lbs.	20,084,003	11,425,005
S. R. middles, made previous to Oct. 1, 1903, lbs.	8,577,400	.....
S. C. middles, lbs....	1,766,686	560,600
Extra S. C. middles, made since Oct. 1, 1903, lbs.	8,191,609	4,368,030
Extra S. C. middles, made previous to Oct. 1, 1903, lbs..	515,980	.....
Extra S. R. middles	6,323,654	1,609,107
L. C. middles, lbs....	153,045	30,018
D. S. shoulders, lbs.	870,999	889,040
S. P. shoulders, lbs.	1,842,459	1,751,651
S. P. hams, lbs....	40,304,685	38,888,922
D. S. bellies, lbs....	16,157,058	15,090,860
S. P. bellies, lbs....	10,133,612	10,502,029
S. P. Cal. or picnic hams, lbs.	7,631,899	10,396,293
S. P. Boston shoulders, lbs.	1,307,299	3,044,384
S. P. skinned hams, lbs.	16,171,239	9,675,016
Other cuts of meats, lbs.	9,985,641	11,369,855
Total cut meats, lbs.	150,017,268	119,600,810

MILWAUKEE

Stocks of provisions in Milwaukee at the close of business February 29, 1904, as reported to the Registrar of Provisions of the Chamber of Commerce:

	Feb. 29, 1904.	Feb. 28, 1903.
Mess pork, winter packed (new), bbls.	8,871	1,386
Other kinds of barreled pork, bbls....	4,558	3,144
Prime steam lard, contract, tierces	3,577	288
Other kinds of lard, tierces	3,057	574
Short rib middles, lbs.	3,813,395	1,903,018
Extra short rib middles, lbs.	197,551	377,767
Short clear middles, lbs.	146,102	66,529
Extra short clear middles, lbs.	202,961	224,364
Long clear middles, lbs.	192,984	24,165
Dry salted shoulders, lbs.	525,516	200,130
Sweet pickled shoulders, lbs.	392,550	416,600
Sweet pickled hams, lbs.	6,547,772	3,114,000
Dry salted bellies, lbs.	1,440,254	962,675
Sweet pickled bellies, lbs.	799,080	580,226
Sweet pickled California or picnic hams, lbs.	1,019,700	725,600
Sweet pickled skinned hams, lbs.	1,185,200	447,000
Other cut meats, lbs..	3,925,961	3,760,632

KANSAS CITY

Stocks of provisions in Kansas City, at the close of business February 29, 1904, as reported to the Board of Trade:

	Feb. 29, 1904.	Feb. 28, 1903.
Mess pork, bbls.....	353	10
Other kinds pork, bbls	2,316	1,486
P. S. lard contract, tierces	3,903	1,265
Other kinds lard, tcs.	9,254	5,158
Short rib middles, lbs.	6,746,600	1,444,900
Short c/r middles, lbs.	425,700	54,200
Extra short clear middles, lbs.	3,718,800	3,363,900
Long clear middles, lbs.	29,700	74,500
Dry salt shoulders, lbs	1,203,500	616,800
Dry salt bellies, lbs..	3,429,300	2,446,700
Sweet pickled shoulders, lbs.	246,700	609,600
Sweet pickled hams, lbs.	12,138,600	11,754,600
Sweet pickled bellies, lbs.	3,140,300	2,160,300
Sweet pickled California hams, lbs...	2,746,100	3,716,100
Sweet pickled skinned hams, lbs.	4,611,300	2,865,300
Other cut meat, lbs..	4,931,100	3,511,600
Total cut meats, lbs..	43,367,700	32,618,200
LIVE HOGS.		
	Feb. 29, 1904.	Feb. 28, 1903.
Received	200,126	156,603
Shipped	1,191	.....
Driven out.....	199,267	156,055
Average weight.....	222	220

OMAHA

Stocks of provisions in South Omaha, Neb., at the close of business February 29, 1904, as reported to the Omaha Board of Trade:

	Feb. 29, 1904.	Feb. 28, 1903.
Mess pork, bbls....	761	71
Other kinds bbl'd pork	1,410	1,246
P. S. lard "contract" tierces	2,421	1,112
Other kinds lard, tcs.	1,869	2,591
Short rib middles, lbs.	3,150,065	1,021,210
Short c/r middles, lbs.	1,520,663	689,339
Extra short clear middles, lbs.....	6,864,047	7,958,538
Extra short rib middles, lbs.....	1,183,402	531,689
Long c/r middles, lbs.	6,685	13,400
Dry salt shoulders, lbs	723,889	673,759
Sweet pickled shoulders, lbs.....	682,100	572,535
Sweet pickled hams, lbs.	11,067,602	12,022,252
Dry salted bellies, lbs.	3,417,603	3,747,133
Sweet pickled bellies, lbs.	3,355,037	3,880,666
Sweet pickled California or picnic hams, lbs.....	2,644,425	5,120,804
Sweet pickled skinned hams, lbs.	5,407,359	4,550,679
Other cut meats, lbs.	2,491,246	2,260,997
Total cut meats, lbs..	42,514,123	43,043,001
LIVE HOGS.		
	Feb. 29, 1904.	Feb. 28, 1903.
Received	221,897	204,040
Shipped	163	1,295
Driven out	221,536	202,422
Average weight.....	231	235

NEW YORK LARD STOCKS.

Prime, 6,834 tierces; off grade, 100 tierces; stearine, 1,068 tierces; total, 7,992 tierces, against 6,435 tierces February 1.

FOREIGN FROZEN MEAT TRADE

(From London Correspondent in February "Cold Storage.")

The usual careful summary of the past year prepared by the Colonial Consignment and Distributing Co., Ltd., says that the chief feature in the market for frozen meat has been the steady downward trend of values; that it would be hardly too much to say that a year of fair promise has ended in disappointment, in spite of the fact that the average prices for the twelve months seem to indicate satisfactory returns to the colonies. In every respect the close of 1903 provides a contrast with its opening, and a comparison of prices for frozen meat shows a loss of fully 1d. per pound. One reason for this is the great increase in shipments of American beef, which increased during the past year by 74,040 cattle and 390,231 cwt. of fresh beef. Another reason attributed is the wet weather prevailing during 1903, which caused a large number of carcasses of home-fed mutton to be sent to market during the autumn to avoid risk of loss from "fluke" or other disease, which from their immature condition were sold at low prices, unfavorably affecting the market for frozen mutton.

The great development in the trade in chilled beef from Argentina owing to the closing of the ports for live stock, had a great deal of influence on the market for frozen beef.

The total imports of frozen mutton amounted to 5,582,063 carcasses, against 4,779,786 in 1902, or an increase of 802,277 carcasses. To this increase New Zealand contributed 544,538 and the River Plate 228,579 carcasses. Of the above amount of total imports New Zealand sent 2,424,009; Australia, 214,064; River Plate, 2,943,990 carcasses. The smaller number of Australian imports, compared with 796,508 in 1901, are, however, an increase on 1902, when only 184,904 were received, showing that the drought has reached its climax and more favorable shipments may be anticipated.

The Range of Prices.

The highest price for best quality New Zealand mutton was reached in January, 5½d.; the lowest in December, 4d. The highest price for Australian was obtained in January, 4½d.; the lowest at the end of December, 3d. River Plate prices, usually ½d. to ¾d. below New Zealand, were much reduced in October, apparently to secure the trade in the country, a large number of sales being effected as low as 2½d. per pound to clear the market. The first shipment from the new works at La Blanca were made in July.

With respect to the trade in frozen lamb, the expansion in supplies each year is met by the growing demand. The shipments from New Zealand for 1903 were 2,160,763, an increase of 373,133; from Australia, 264,177, a decrease of 273,242; from the River Plate 174,498, an increase of 62,740, the total number of carcasses imported being thus 8,181,501, showing a total increase of 964,638.

The highest price for New Zealand lamb was obtained in February, 6½d.; the lowest in December, 4½d. The highest price of Australian lamb was obtained in Janu-

ary, 5½d.; the lowest in December, 4½d. River Plate obtained, as a rule, within a fraction of the prices for New Zealand.

The imports of beef, frozen and chilled, increased from 686,825 quarters and pieces in 1902 to 703,548 in 1903, New Zealand sending 92,092, a decrease of 61,503; Australia 45,587, an increase of 1,248; River Plate 565,860, an increase of 76,978.

Several experimental shipments were made during the year. These included some shipments of New Zealand yearlings, under the title of veal, which from their being neither that nor beef proved almost unsalable; a consignment of mutton arrived from Russia at the end of January, carefully packed, but of such poor quality, and in such bad condition that it was at once condemned; some consignments of beef from the same country in May of equally poor quality; several shipments of mutton from Servia which came to hand in bad condition, and the weekly shipments of frozen mutton from the United States were continued for a few weeks, until the middle of March, when the returns had probably ceased to be remunerative.

The Outlook for 1904.

As regards the outlook for 1904, the C. C. & D. Co. states: "Speaking generally, increased supplies of meat may be looked for during 1904. The New Zealand mutton output cannot be expected to advance, in view of the reduction in her flocks, but there is almost certain to be a large increase in the quantity of sheep available for export from Australia, and the operation of the new factories in Argentina and Uruguay should augment the output from that quarter.

More than usual interest attaches to the review of the frozen meat trade in 1903, issued by Messrs. W. Weddel & Co., owing to the reference therein to Mr. Chamberlain's proposal to place a duty upon imported foreign meat, with a view to fostering colonial exports. Figures are given of the total supplies of Great Britain, foreign countries and the colonies—figures which, the review says, may surprise those who maintain that the British Empire could rely upon its own resources for its meat supply, or that a preference given to our colonies would even enable them to fill up the gap left if an import duty curtailed shipments from foreign countries. The figures show that in the case of beef 301,771 tons, or 80 per cent. of our imports, come from foreign countries, and only 73,473 tons, or 20 per cent., from our colonies. The bulk of the beef comes from the United States, whose exports to us represent not more than 10 per cent. of that country's production. It is alleged that American beef is exported to the United Kingdom partly to maintain prices at a high level in the States. To that end it is frequently sent here at a serious loss, and it is improbable therefore that a slight duty would materially lessen the volume of that foreign trade.

In regard to mutton and lamb, the colonies already supply a larger percentage of our imports than do foreign countries (113,075 against 92,240 tons), and nothing has limited

their export except their capacity to breed and fatten stock. Messrs. Weddel argue, therefore, that this country having a steadily growing demand for fresh meat, which can neither be met by home production nor by the slowly expanding colonial output, cannot shut out or lessen its foreign supplies without raising the cost to the consumer.

Refrigerating Works' Capacity.

The list of freezing works in the world which accompanies Messrs. Weddel's report includes 58 establishments, with an estimated total killing and freezing capacity per day of about 180,000 fifty-six pound carcasses. As the total amount of frozen and chilled meat sent out from these works during the past year was 9,000,000 carcasses of mutton and lamb and about 1,300,000 quarters of beef, or about 325,000 tons of frozen meat, it was only about three-fourth of the actual producing capacity. There seems, therefore, to be a very ample margin of freezing power with which to supply the probable requirements of all markets for some time to come. Nevertheless, some important additions are being made in New Zealand, in the Argentine Republic and in Uruguay, so that unless some new markets can be opened up it is difficult to see how profitable employment can be found for all the present works with the new ones in the near future.

With respect to the prospects for 1904, Messrs. Weddel consider that the general trade of the country is not so satisfactory as it was a year ago, and some prospective slackening in the consumptive demand must be reckoned upon. Though home supplies are certain to be inadequate, American, Canadian and Argentine exports should be a full average; Australian more than in recent years; New Zealand only slightly under its best, so that the utmost that can be expected from 1904 seems to be a bare maintenance of the general level of prices current last year.

RECORD YEAR FOR FERTILIZERS.

The fertilizer business is booming more than ever in the South at this time. Take Georgia, for example. The season of 1902-03, from Oct. 1 to the same date in the year following, was the largest fertilizer year ever known in Georgia, the total sales being 500,000 tons. This year promises to surpass that, according to the figures for the season so far as it has progressed.

The sale of fertilizer tags by the department from Oct. 1, 1903, to the middle of February, 1904, has been 4,127,375, representing 412,737,500 tons of fertilizers, as against 3,986,590 tags for the same period of the season 1902-03, representing 398,659 tons. The value of these tags for the present season at 10 cents per ton is \$41,273.75, and for last season \$39,865.90, showing an increase of \$1,407.85 in favor of the present season. There has been a similar increase in the sale of cottonseed meal tags, the sale of which is also regulated by the Department of Agriculture. From Oct. 1, 1903, to the middle of February, 1904, there were sold 1,213,660 cottonseed meal tags, as against 1,065,500 in the same period of the season 1902-03. The value of these tags the present season was \$6,068.30, as against \$5,477.50 for last season, an increase of \$590.80 for the present season.

BOLL WORM AND WEEVIL REMEDIES.

In a bulletin just issued by the Department of Agriculture on the cotton boll-worm, A. L. Quaintance, the agent in charge of the investigations, gives a complete account of the results of his experiments for 1903, and makes some specific recommendations. He says the investigations of the department warrant the recommendation of the following methods of lessening boll worm injury:

1. Plant an early maturing variety of cotton as early as possible in the spring and give the plants good cultivation. By good cultivation is meant five or six plowings, with three or four choppings. By plowing and cultivating in this way a good crop may usually be insured before the boll worms become destructive in August. In the territory infested with the cotton boll weevil this course becomes doubly necessary, as it is only by such methods that ordinarily a crop of cotton may be made. The possibility of the plans developing a crop after the boll worms may leave is removed on account of the presence of the weevil. Early planting of early maturing varieties will also allow of the crop being gathered much earlier in the fall than is possible with plantings of ordinary gin seed at the usual time. It will thus become possible to a considerable extent to clear the land of the plants and plow in the fall, which, aside from being good farm practice, will exert a very beneficial influence in controlling the boll worm by breaking open their hibernation cells and exposing the pupæ to the influences of cold and rain during the winter.

The above recommendations involve no outlay of labor and capital not requisite to successful cotton culture, and, furthermore, agree entirely with the best known methods of circumventing the ravages of the Mexican cotton boll weevil. It thus becomes possible to secure the maximum amount of freedom from the depredations of the boll weevil and the boll worm by one and the same course of farm practice.

2. The use of corn as a trap crop may be advantageously combined with the cultural methods indicated above, especially so if it is not found possible to plant early on account of climatic conditions or for other reasons. In planting cotton leave vacant strips across the field every 200 or 300 feet, sufficiently wide for planting 10 or 12 rows of corn. These strips should be planted with corn so that it will be in prime silking condition not later than August 1. Under favorable conditions of rainfall and with good cultivation, Mexican June corn planted by June 1 will be tasseling and silking freely by August 1. Plant cowpeas in the corn belts, so that the plants will be flowering along with the appearance of the tassels and silks on the corn. The cowpeas are to furnish food for the moths, and will largely prevent their going to the cotton for food and depositing

thereon a certain proportion of their eggs. The corn may be allowed to mature and may be harvested in the usual way. Sufficient corn may be grown in these belts to meet a portion of the needs of the plantation and at the same time afford material protection to the cotton crop from bollworms. As will at once appear, *the planting of corn through the cotton field at the usual time in the spring is bad practice from a bollworm point of view.* With the hardening of the corn during July the insects turn their attention to cotton. The trap rows of corn should not be tasseling and silking before about August 1.

III. Experiments with poisons the past year indicate that these may be profitably used in lessening bollworm injury to cotton. The poisons should be applied to the plants in time to insure the destruction of the maximum number of young larvæ of the August generation. In general, this will be about August 1. When it is noticed that the moths are becoming abundant in the cotton fields the first application should be made, and a second application should follow a week or ten days later. The occurrence of even a moderate rain shortly after the poison has been applied will necessitate another application if best results are to be secured. If conditions are favorable for bollworm injury, poison should be used again about September 1, in time to check injury from the September generation of larvæ. In the work of poisoning special pains should be taken to cover all parts of the plant as nearly as possible. The poisons should be distributed much more generally over the plant than is necessary for the cotton caterpillar. Of the

modes of applying the poison little need be said. The general use of poisons against the cotton caterpillar has familiarized most planters with the details of this work. In point of convenience the dusting method is to be recommended. If an abundance of water is at hand, suitable spraying machinery may be used.

WINTER TROUBLES IN ENGLAND.

While the meat trade in this country has suffered during the present winter from blockades and other effects of the continued cold weather, the British tradesmen have been having their own troubles. It has been the wettest winter known on the island for many years, and all livestock has suffered, as well the agriculture. "One effect of the successive floods and rains so prevalent throughout the country is to develop abnormally the diseases to which sheep are subject," says the "Meat Trades Journal." "As a result enormous quantities of fluky livers will be found, for which the butchers will be held responsible, and persecuted rigorously according to the drastic laws of our paternal government and grandmotherly county councils. A guarantee, either implied or specific, that animals bought in open market for consumption as human food should pass inspection, ought to be asked for in every market of the United Kingdom."

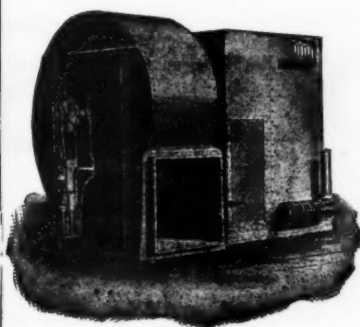
PURE FOOD AT ST. LOUIS FAIR.

Three acres are devoted to the display of pure foods at the World's Fair. The exhibit is in the Palace of Agriculture, and is in charge of Paul Pierce.

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134-

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See Page 48 for

Wanted and For Sale Advertisements

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Floor A, Produce Exchange

New York City

TRADE GLEANINGS

Fergus Packing Company, Fergus Falls, Minn.; capital \$50,000. Edward J. Webber and others incorporators.

Maxey's Manufacturing Company, Maxey's, Ga., will build a cotton seed oil mill.

Eherfield Soap Company, Tiffin, O., has increased capital from \$15,000 to \$50,000.

Ahamo Company, Omaha, Neb.; capital \$50,000. R. P. Lawrence and John Michaelson, incorporators. Will manufacture soap.

Bucyrus Fertilizer Works, Bucyrus, O., has been sold to the Toledo Rendering & Fertilizer Company.

Fat Rendering & Fertilizer Company, New Haven, Conn., has increased capital from \$50,000 to \$100,000.

Cortland Beef Company, Cortland, N. Y., has lost its plant by fire. Loss \$20,000.

Crystal Springs Cotton Oil Fertilizer and Manufacturing Company, Crystal Springs, Miss.; capital \$75,000. A. Lotterhos, president; W. H. Barron, vice-president; A. T. Townes, secretary and treasurer.

Essex Leather Company, Newburport, Mass.; capital \$10,000. Lewis Balch, president, G. W. Richardson, treasurer.

G. E. Keith Company will build a large addition to its tannery in Campello, Mass.

Thomas A. Kelley & Company will build an addition to their leather factory in Lynn, Mass.

Peter Emerich Meat Company, Evansville, Ind.; capital \$5,000. Peter Emerich, Louis A. Dans, and others, incorporators.

C. S. Dengler Company, Camden, N. J.; capital \$25,000. Joseph E. Cotter, Em. F. Eidell and others, incorporators.

United States Leather Company has purchased the Eastern and Western Tannery Company's plant in Tomahawk, Wis. C. C. Ramsey is manager. Sole leather will be manufactured. Hemlock bark used in the process is found in that vicinity in sufficient quantity to last 50 years.

Springville Canning Company, Springville, N. Y.; capital \$20,000. G. D. Conger, R. D. White and others, incorporators.

Pontotoc Cotton Oil Company, Pontotoc, La.; capital \$50,000. O. J. Knox, W. F. Jackson and others, incorporators.

National Tanning & Fur Company, Milwaukee, Wis.; capital \$20,000. Charles Reichenbaum, Samuel Schwartz and others, incorporators.

Mount Olive Canning Company, Mount Olive, Ala.; capital \$10,000. J. B. Parkman, A. G. Walker and others incorporators.

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'PHONE, HARRISON 881

David M. Cohen and Henry S. Cohen, formerly the "Standard Soap Works" in Boston, Mass., have filed a petition in bankruptcy. Liabilities, \$62,908.

NEW COLOMBIAN TARIFF.

The Colombian tariff law of Oct. 31, 1903, translated by Consul General A. G. Snyder at Bogota, shows the following changes, among others, in the new tariff scale for imports into that country.

Class 2.—1 cent gold per kilogram (2.2046 lbs.), stearic acid for commercial purposes, stearin and tallow, not manufactured; substances and apparatus necessary for the manufacture of ice, so long as the importation is for the use of factories destined for the public service.

Class 4.—3 cents gold per kilogram (2.2046 lbs.)—Meat in brine and not prepared; common resin and tallow soap.

Class 6.—10 cents gold per kilogram (2.2046 lbs.)—Alimentary products, prepared, such as bologna, sausages, salmon, ham, and similar articles; hides, skins, and leather, unmanufactured, except patent leather; tallow or other candles not specifically mentioned; common oil soap and others, except those which figure in the fourth class.

PROPOSALS FOR SUBSISTENCE STORES.—Office Purchasing Commissary, U. S. Army, 39 Whitehall street, New York City, N. Y., March 5, 1904.—Sealed proposals for furnishing and delivering subsistence stores in this city for the month of April, 1904, will be received at this office until 11 o'clock A. M. on March 15, 1904. Information furnished on application. Envelopes containing bids should be marked "Proposals for Subsistence Stores opened March 15, 1904," addressed to Major D. L. BRAINARD, Commissary, U. S. A.

PROPOSALS

Sealed proposals will be received at the office of the Light-House Inspector, Tompkinsville, N. Y., until 12 o'clock M., Tuesday, March 15, 1904, and then opened, for furnishing and delivering provisions for vessels and stations in the Third Light-House District for the fiscal year ending June 30, 1905, in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to Captain Wm. M. Folger, U. S. N., Inspector.

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PROPOSALS FOR FRESH VEGETABLES.

—Office of Chief Commissary, Manila, P. I., Jan. 15, 1904.—Sealed proposals, in triplicate, will be received here until 11 A. M., May 10, 1904, and then publicly opened for furnishing and delivery of fresh vegetables to Subsistence Department at Manila, P. I., during year ending June 30, 1905. About 680,000 pounds potatoes and 140,000 pounds onions per month will be required. Accepted vegetables will be admitted free of customs duties. United States reserves right to decrease amount called for in contract by not to exceed 40 per cent. upon reasonable notice to contractor, or to increase amount called for, with consent of contractor. Each proposal must be accompanied by Bidder's Guaranty in amount of \$20,000 or by certified check for that amount on bank of approved standing in Manila. Bidder to whom contract is awarded will be required to give bond, penalty of which will be fixed by Chief Commissary. Information furnished on application. Envelopes containing proposals should be marked: "Proposals for fresh vegetables for F. Y. 1905, to be opened May 10, 1904," and addressed to HENRY G. SHARPE, Colonel, U. S. Army, Chief Commissary.

See page 48 for the "Wanted and For Sale" Departments. There may be a "find" there for you.

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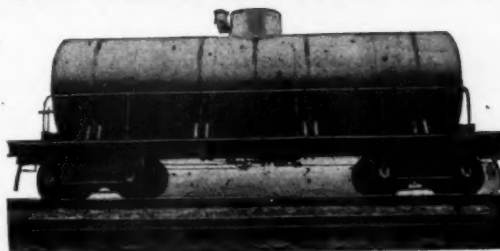
ANY CAPACITY

ANY PURPOSE

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Warren City Tank & Boiler Works,

WARREN, O.



EXPORTS SHOWN BY STEAMERS.

Following were the exports of commodities from New York to Europe for the week ending Feb. 27, 1904, as shown by Lunham & Moore's statement:

Steamers.	Oil		—Beef—				—Lard—	
	cake.	Cheese.	Bacon.	Butter.	Tcs.	Bbbs.	Pork.	Tcs. Pkgs.
Ivornia, Liverpool.....	3057	728	400	630	....	200	404	1250
Cedric, Liverpool.....	721	1365	366	....	....	....	305	3847
Cevic, Liverpool.....	1759	708	207	....	....	....	250	....
St. Paul, Southampton.....	....	945	731	....	....	....	68	1000
Mesaba, London.....	687	239	660	....	....	100	251	1953
Jersey City, Bristol.....	....	132	....	....	....	....	....	3725
Exeter City, Bristol.....	....	106	....	....	....	....	....	9015
Corean, Glasgow.....	100	353	....	251	....	....	285	610
Pennsylvania, Hamburg.....	....	85	58	10	55	....	677	3010
Sloterdijk, Rotterdam.....	9535	....	....	55	65	....	....	725
Statendam, Rotterdam.....	22724	....	60	479	53	....	1640	2525
Tenagra, Rotterdam.....	....	....	....	....	....	....	....	....
Main, Bremen.....	....	155	....	....	475	....	175	1750
Lahn, Bremen.....	....	....	100	....	....	....	....	50
Kroonland, Antwerp.....	3380	....	654	....	....	....	105	635
British Princess, Antwerp.....	9540	....	180	....	....	60	222	620
Bordeaux, Havre.....	2023	....	....	....	....	....	....	....
La Touraine, Havre.....	....	....	....	....	....	....	25	6
Neckar, Mediterranean.....	....	....	....	....	....	....	....	....
Victoria, Mediterranean.....	....	285	....	....	....	25	85	275
Peconic, Mediterranean.....	....	50	....	....	....	....	415	605
Prinz Oskar, Mediterranean.....	....	125	....	....	....	....	....	....
Sicilia, Mediterranean.....	....	95	....	....	....	....	....	50
Susquehanna, South Africa.....	....	....	....	....	....	....	....	151
Tudor Prince, South Africa.....	....	....	....	....	20	....	....	348
Total.....	48961	5253	5762	2315	1425	668	385	4905 32240
Last week.....	14963	5738	10820	4181	1374	714	594	5293 65076
Same time in 1903.....	23557	2950	7111	2755	1473	1432	825	6060 60638

ADDITIONAL JANUARY EXPORTS.

Following are figures compiled by the Bureau of Statistics, Department of Commerce and Labor, on certain exports for January, 1904, and for the seven months ending with January, as compared with the same period of the previous year. These are in addition to the export figures for meats and provisions published in The National Provisioner on Feb. 20:

Bones, hoofs, horns, etc.—January, 1903, value \$20,720; January, 1904, value \$43,214. For seven months ending January, 1903, value \$113,162; same period, 1904, value \$120,231.

Hides and skins.—January, 1903, 1,271,475, value \$104,497; January, 1904, 6,004,342, value \$572,493. For seven months ending January, 1903, 7,005,188, value \$653,846; same period, 1904, 20,129,813, value \$1,975,847.

Cottonseed Oil Cake and Meal.—January, 1903, 129,339,977 lbs., value \$1,529,241; January, 1904, 100,287,098 lbs., value \$1,119,382. For seven months ending January, 1903, 747,642,572 lbs., value \$8,710,296; same period, 1904, 554,054,565 lbs., value \$6,097,849.

Lard Oil.—January, 1903, 19,988 gals., value \$19,076; January, 1904, 37,754 gals., value \$24,454. For seven months ending January, 1903, 222,637 gals., value \$192,096; same period, 1904, 211,689 gals., value \$143,103.

Cottonseed Oil.—January, 1903, 4,202,288 gals., value \$1,679,262; January, 1904, 3,291,023 gals., value \$1,234,960. For seven months ending January, 1903, 24,282,614 gals., value \$9,644,122; same period, 1904, 15,593,567 gals., value \$5,920,116.

ENGLISH MEAT IMPORTS.

During the month of January the imports of live meat into England amounted to 43,612 cattle and 40,921 sheep, of which 87 per cent. of the cattle and 90 per cent. of the sheep came from the United States, and the balance from Canada. This was an increase

of more than 14,000 cattle, and the same number of sheep over January, 1903. The imports of fresh beef amounted to 342,284 cwts., as against 304,384 cwts. last January. The increase included 28,272 cwts. from the United States, 15,150 cwts. from Argentina and 10,045 cwts. from New Zealand. There was a decline in imports of mutton and also in pork, the shrinkage in supplies from this country reaching 5,984 cwts. Bacon also fell off considerably.

Reports show that meat shipments from New Zealand to London during the month amounted to 3,093 quarters of beef, 131,925 carcasses of mutton and 204,100 of lamb.

GREATEST JANUARY EXPORTS.

Exports of manufactures in January and in the seven months ending with January show a larger total than ever before in the same portions of the year. For the month of January they amounted to \$38,213,352, while the highest January record on any former occasion was that of 1900, when they were \$35,586,940. For the seven months ending with January they amount to \$250,214,936, and the highest record for that seven months' period in any preceding year was that ending with January, 1901, when the total was \$239,564,064. Thus the total for January is \$2,500,000 in excess of any preceding January, and for the seven months ending with January is about \$11,000,000 more than in any preceding seven months ending with January. These figures are shown by an analysis of the January exports just prepared by the Department of Commerce and Labor through its Bureau of Statistics.

SEVERE PENALTY IMPOSED.

A meat dealer in Bedfordshire, England, was recently sentenced to six months in jail for selling diseased pork. Other similar cases have been treated with severity by English courts.

The National Provisioner

NEW YORK and
CHICAGO

Published by

THE FOOD TRADE PUBLISHING CO.

(Incorporated Under the Laws of the State of New York.)

DR. J. H. SENNER..... President

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The NATIONAL PROVISIONER NEW YORK AND CHICAGO

"TALLOW" CHEESE VS. LARD

Minnesota "makes no bones" of stuffing oleo oil into cheeses and water into butter and then selling them for the real, simon-pure article which they purport to be. But that virtuous butter State thinks that oleomargarine, which, by the way, contains less oleo oil than does oleo or store cheese, should not be sold there at all—not even with the 10c. revenue stamp on each pound of the colored article. That is a bit inconsistent, but inconsistencies do not bother the butter conscience of the Minnesota food commissioner. If Congress imposed a 10c. per pound tariff upon Minnesota cheeses which contained other grease than that found in milk, because such cheeses usurp the good name of New York "full cream," the Western State would rebel at once.

This humorous Minnesota official calls the oleo oil in butterine "tallow." He permits the same substance in his store cheese to be called "full cream," because cream sounds better than tallow to the purchaser. However, this same dairy and food commissioner announces that "only one sample of lard out of 76 samples analyzed was found adulterated with tallow." He didn't say if he found any tallow butter. The presumption of his silence on the point is that he did not. What objection the meat-eating public of Minnesota has even to the use of edible tallow in cooking does not appear. But Iowa has more hogs than anything else. Maybe that explains it. Iowa and Minnesota are a sort of Siamese butter twins.

SANITARY FRIEND OF INDUSTRY

The possibilities of cold storage are limitless, apparently. Nothing can degenerate while in a frozen state. Cold storage, therefore, is a sanitary prolonger of food life. The cold air holds it in the state in which it is caught. A frozen reindeer was taken from the snow of Norway after it had lain there for probably twenty or thirty years. The meat was found to be fresh and palatable. Turkeys have been kept in a frozen state for a dozen and chickens for ten years. If the ice holds the stuff as it catches it why should that state not last for generations? It is not this longevity of the storage process, but the fact that meats and other perishable products are held from decay until such time and season as they may be needed to supply a deficiency in the food supply.

The recent cold spell was an illustration of this fact. If the surplus of meats could not have been stored and held, many centers

would have had a meat famine because of the ice-bound freights. Much suffering would have ensued. To this kind of food conservation is due our all-the-year-round real spring lamb, spring chicken, vegetables, apples and other condiments which the winters of the olden times barred from us, and for which we paid amazingly high early spring and late fall prices. Cold storage also removes the old-time necessity of our eating such a large percentage of fly-blown hams, bacon and tainted beef. Cold storage has been a godsend to the human stomach, as well as to enhance the average values of perishable products.

A MEAT OPPORTUNITY

Success in modern warfare depends as much upon food as it does upon guns and munitions. Armies move so fast and changes of base are made so rapidly that the handy or prepared ration has more generally taken the place of the slow, migratory herd, whose toughened and heated flesh is not so suitable or safe as the cured or scientifically canned condiment. This is especially true of the live meats in summer time, when the gastronomy of the troops is severely tried by climate, without the additional disturbing cause of heated meats.

Camp disorders have more largely been due to fresh meats than to any other single cause. The civilian cannot eat freshly killed, unrefrigerated meats without the after-effects of intestinal disturbances. The soldier in the field can less afford to eat fresh meats. Cattle move slowly. Eight miles a day is a forced march for a bovine. Modern infantry has often to move twice as far. A herd moves itself, it is true, but both men and armament must convoy and guard it. Not only this, but a strong force has to be detached to protect this predatory food base. The experience of modern fighting is that the prepared and cured food is better in every way.

The result is that those countries which have the food supplies and the food factories must supply the field commissariat. The United States holds an enviable position in this respect. If the present Eastern war hangs on beyond the summer this country will find both its energy and its source of supply heavily taxed. The prospect is that between 800,000 and 1,000,000 men will be put in the field. These will need at least 500,000 lbs. of meat on the average per day. They would require more, but for the rice-fish diet of the Japanese. The consumption of 500,000 lbs. per day means 3,500,000 lbs. of meat per week, nearly 160,000,000 lbs. of meat per year. The prospect of a drawn-out contest will call for this much meat before summer, so as to provide a safe base of supplies. America may reasonably expect orders for 60,000,000 lbs., if she can furnish it.

ALKALINED OLIVE OIL

Everything that is branded "pure" or called pure is not pure, as the medical fraternity and the eating public understand the term. It may be chemically pure, as the scientist understands it. Carbolic acid and vitriol may be chemically pure, but still improper in food mixtures. Sulphuric acid and alkalis are not proper food adulterants, or one might eat laundry soaps and other things with impunity. Renovated butter is laundry soap in its mildest form. Cottonseed oil and olive oil are not considered pure as they are crushed out. They have to be clarified, technically purified.

It will be a shock to the sensitive housewife who thinks she prefers olive oil to cottonseed oil to be told that the delicate oil of the olive is treated with acids and lyes. The olive oil of the trade is "purified" with sulphuric acid. If not so treated it is juggled with an alkalined lye. While it may be decanted and filtered, there is left that the thought of which nauseates the public mind—acids and lyes. Those who have seen the three strata—clear top, emulsified middle and lower black—may well wonder if all industrial olive oil is even properly filtered. The simple process of treating cottonseed oil with fuller's earth is harmless. Even a little potash would sound as badly as the acids and alkalis of the olive oil treatment. The public is given to indulging in foolish imaginations. Its eyes often make its stomach "a very sick man."

FAITH IN FERTILIZERS

The public mind is getting more and more interested in the matter of vegetable fertilizers, because the planter and the business man are protruding the subject more and more into our commercial life. The wasted energies of the soil must be supplied by artful means, inasmuch as the average farmer will not worry his head with scientific problems nor his body with more physical exertion than that which is necessary to actually keep the grass and weeds from his growing stuff. There is a well founded impression that fertilizers will be in demand at high prices for some time. The State authorities are stepping between the farmer and the factory, and are fixing the standards of the product. This certification of given outputs has tended to produce a reliance upon the State chemist and a confidence in the stuff made. The effect of this is to encourage the sale of fertilizers, as the farmer more and more looks upon it as ready-made and ready-to-use soil, which saves him both time and labor and helps his crop not only to a faster growth, but to a more fruitful growth. This sort of faith is a good one for the factory. This season promises to be most prosperous for the fertilizer trade.

TECHNICAL AND SCIENTIFIC

VACUUM PROCESS FOR TALLOW.

In the usual methods of tallow-melting, whether over direct fire or by steam heat, with or without additions of water, the albuminous constituents of the raw material are subject to decomposition, and the products of dry distillation and hydrolysis are undoubtedly dissolved by the tallow, to which they impart a yellow color and a disagreeable smell. When water is added, glue is formed, and this, too, undergoes decomposition during prolonged boiling, both the glue itself and its decomposition products being also dissolved by the tallow, and thus forming a suitable medium for the development of bacteria. It is also probable that tallow obtained by melting over a naked fire contains a certain quantity of organic bases in solution, these then partially saponifying the tallow and liberating glycerine, which easily ferments and damages the tallow. A similar final result follows from the changes produced in the tissue present in the raw fat, when steam heat is employed.

In view of these considerations, and of the fact that solutions of glue do not change when boiled in vacua, though readily decomposed on boiling in the air, Lidoff concluded that the formation of glue from its originating materials would proceed very slowly in vacuum pans; and, in fact, he found that no glue could be obtained by boiling cartilage with water in a vacuum pan for one hour and a half, the material remaining entirely unchanged. For this reason he proposed to apply the vacuum process to tallow-melting, and has obtained successful results from the operation. To ensure success the crude tallow should be carefully washed, then sorted to remove as much as possible of the bones, fibres, sinews, and other fleshy matter, this operation being followed by chopping the mass down to a homogeneous pulp in suitable machines. The pulp should be washed until the water runs away clear, and the residue should then be melted in a vacuum pan (350 to 400 mm. vacuum) for one to one and a half hours.

When this last operation is completed, the contents of the pan are poured into the clarifying tank, where the tallow settles down, or rather the water and greaves sink to the bottom, leaving the tallow floating on the surface. To ensure complete separation of the impurities, the vessel is lagged with non-conducting material. Nevertheless, however, carefully this clarification process has been carried out, it is advisable to force the clarified and solidified tallow through a fine filter, in order to remove the finely divided solid impurities held in suspension.

The purified product is pure white in color, exhibits a decidedly crystalline structure, is perfectly inodorous, and will keep for a very long time without suffering any change in its properties. For example, the acid value—initially 24—of a sample prepared in this manner, and stored for six years in a tightly closed porcelain vessel, only increased to 32 during that long period; whereas, a sample stored under precisely the same conditions, but prepared from the same raw material by melting over a naked fire, turned bad in the course of a few months, and acquired a highly disagreeable, rancid smell. The greaves furnished by the vacuum process retain the original structure of the tissue, and, when dried, pressed,

and stored in a dry place, keep without alteration for a long time, and form a valuable fodder, as well as constituting a first class raw material for the manufacture of glue, more especially since they principally consist of gelatinous substances—*Chem. Rev. Fett- u. Harz. Ind.*

SOAP TREE OF ALGERIA.

German papers report that steps are being taken in Algeria to manufacture natural soap on a large scale from a tree known as *sapindus utilis*, according to United States Consul General Guenther of Frankfort. This plant, which has long been known in Japan, China, and India, bears a fruit of about the size of a horse-chestnut, smooth and round. The color varies from a yellowish green to brown. The inner part is of a dark color and has an oily kernel. The tree bears fruit in its sixth year and yields from 55 to 220 pounds of fruit, which can easily be harvested in the fall. By using water or alcohol the saponaceous ingredient of the fruit is extracted. The cost of production is said to be small and the soap, on account of possessing no alkaline qualities, is superior to the ordinary soap of commerce.

ADULTERATED PEPPER.

Everybody knows that pure ground pepper is as scarce as radium. The more astonishing is the fact that so very few of the large consumers of the article do not resort to a chemical analysis, which, undoubtedly, is the very best means to ascertain fraudulent admixtures.

It has been found that whole peppers from various sources are of varying specific gravities. This fact has been made use of in the approximate valuation of the different varieties of peppers found on the market and its application is fairly accurate and easy to perform. A one litre measure may be filled with the pepper and the contents weighed, or 100 kernels of average size counted and their weight ascertained. Together with some chemical data the variations of peppers of different qualities, according to their habitat, are given in the following table:

Variety.	Weight per litre.	Weight per 100 Kernels.	Water.	Ash.	Crude fiber.
Singapore	476 grams	4.89 grams	12 %	3.49%	11.4 %
Tellicherry	548 grams	4.45 grams	11.56%	4.21%	12.20%
Lampong	511 grams	3.49 grams	11.40%	5.69%	12.14%
Mangalore	574 grams	8.57 grams	11.61%	4.23%	10.00%
Malabar	570 grams	5.74 grams	9.47%	3.45%	9.68%
Acheen	407 grams	2.66 grams	12.95%	6.15%	14.09%
Pepper shells .....	...	....	10.57%	11.91%	32.15%

DANGEROUS LEATHER ADULTERANT.

In a report to the Department of Commerce and Labor, Consul Baker, at Sydney, New South Wales, says:

"In a recent issue of the *Sydney Telegraph* it is stated that the trade in Australian leather is threatened with extinction on account of the practice among tanners in New South Wales of poisoning their leather for the purpose of giving it weight, though in doing so they render the leather almost valueless. To prove this it is quoted that the annual value of the exports of leather at one house in Sydney has fallen from \$400,000 down to \$25,000 in the past twelve months.

"The same authority says that London merchants hesitate to order leather from New South Wales for fear that they should obtain this adulterated and unsalable leather. It is also charged that the tanners who use this compound do it for the purpose of obtaining unfair profits, knowing the effect of the chemical used on the leather.

"The adulterant used, according to the *Telegraph*, is known as 'normissa,' a salt-like substance. In a side weighing, say, fifteen pounds, a tanner will work in from two to five pounds of normissa, which costs about one-tenth of the price obtained for the leather."

It is evident that the moisture present in the kernels plays an important part in the determination of the weight, and it will be necessary to bring the pepper up to the stated water content by either drying them or placing them in a moist atmosphere, as the case may be. A slight variation, however, from the figures given is unavoidable.

Quite a different aspect confronts the buyer when he has to pass on the purity of the ground pepper. It is well nigh impossible for him to discover by physical means the well calculated and dextrously-added adulterants. A chemical analysis may justly be considered the only safeguard when sophistication of ground pepper is suspected.

On page 48 will be found the "Wanted and For Sale" department, containing interesting information for all departments of the trade.

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QUERIES AND ANSWERS

(CONDUCTED BY M. D. SLIMMER, PH.D.)

If you are in doubt on any question appertaining to your business, ask us freely. If the question involves expert, technical or scientific knowledge it will be referred to a specialist. This column is yours. Address all communication to the Question Editor, National Provisioner, New York.

FACTORS, NORFOLK, VA.—Please tell us what time the spring run of hogs is expected to begin, also whether a decline of provisions is likely at this time this year.

Owing to the advanced conditions of hogs the spring run will begin in the early part of March. The trade in provisions is bullish and no decline is anticipated.

H. & D., PITTSBURG, KAN.—What are the present methods of converting blood into a merchantable commodity?

There are at present two methods in vogue for the utilization of fresh blood. First, the manufacture of albumen; secondly, that of dry blood for fertilizing purposes. In the first process considerable fertilizer is obtained as a by-product. While the apparatus to produce albumen need not be very expensive, still the care and labor necessary has usually been found to more than offset any increased profits from the same. This may, however, be overcome by a very close study of the matter and practical experiments which could be explained in detail, if so desired.

The method that is used for the manufacture of dried blood in all successful packing houses in this country consists in coagulating the fresh liquid by means of live steam. The method of application of the steam is usually such as to cause the most uniform agitation of the liquid blood, the aim being to produce a product which has good draining properties and in which the resultant blood waters shall be as free from solids as possible. The exact amount of heat and agitation for any particular case is a matter that can only be determined by constant watchfulness. The amount of water that gets into the blood upon the killing floor is of extreme importance; unless great care is exercised, blood from grass-fed cattle seldom gives satisfactory yields. The cooking must be continued long enough to coagulate all the albumen; excessive cooking is to be avoided.

The surplus water is drained off and the wet blood pressed by hydraulic pressure and then, after being run through a picker, put into a dryer.

In plants killing but a small number of cattle, a dryer of the type of the Smith dryer is to be recommended. As a rule, the finished product should contain about 10 per cent. of moisture. This gives a product which contains close to 18 per cent. of ammonia. The amount of moisture that can be economically left in the blood must be determined by the ratio of values per unit of ammonia, and the cost of fuel in any given locality. Where

economical drying is desired, it is best to dry the blood until the fine particles contain the required amount of moisture; then screen and re-dry the larger particles which contain more moisture. Where fuel is cheap, the drying can be carried further, and the product finally ground up so as to give a uniform product. After being removed from the dryer, the hot material must be spread out in a thin layer, so as to allow the heat and steam to escape from the same. If this is not done, the finished product is apt to heat up and rapidly lose ammonia.

In some of the most progressive firms of the country there has recently been inaugurated a method of mechanical agitation of the blood during the cooking process. This makes it more easy to determine, when the product is in the best possible condition. For want of space, we cannot enter into more detail here.

A number of chemical methods of drying blood have been devised. One formerly used to some extent in Europe is interesting on account of the ease and cheapness with which it can be applied, and because of the fact that the resultant product can be dried in the open air without danger of decay, if the weather be dry. This method consists of agitating the fresh blood for about five minutes with 2 per cent. of its weight of ground unslacked lime, and allowing it to stand. After a half hour the entire mass congeals and can then be cut up and dried. Most of the lime sinks to the bottom of the vat, so that the resultant product is but slightly contaminated with it. There is, however, some loss of ammonia, and the resultant product will not average more than 13 to 14 per cent., as against 17 to 18 per cent. produced by cooking.

Experiments with this method would be very interesting in a warm dry climate, and we will gladly give full details to any one interested.

L. G. N., OMAHA, NEB.—Kindly tell us how to make oleo oil and stearine from slaughter fats, and is this practical for a small plant killing 50 cattle a day?

The method of producing oleo oil and stearine would be somewhat complicated for a plant of this size, owing to the delicate nature of fats and the absolute adherence to detail necessary. It would require at least one or two persons to take care of this process; but with a small outlay it could be made to pay a dividend of approximately \$15 to \$18 a day; this, of course, being governed by the relative



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prices of first-grade oleo oil and stearine as against prime tallow.

Prime requisites for good oil are intelligent selection of the fats and proper treatment of the same. After removal of the animal heat by means of cool water, the fats must be thoroughly chilled. They are then hashed and run into the melting kettle, the heat of which is gradually raised by means of a water jacket so that when the kettle is full, the thermometer shows about 160 deg. Fahrenheit. The mixture is kept agitated by means of paddles making at least 40 revolutions per minute. They should be so arranged as to give an upward as well as rotary tendency to the contents of the kettle.

For a strictly neutral product, the temperature of 165 deg. must not be exceeded. After being kept at 160 to 165 deg. for 1 to 1½ hours, the paddles are withdrawn, and the mixture allowed to settle, some salt being strewed on the surface to assist this process. When clear, the supernatant oil is drawn into the settling kettle, where it is again allowed to settle at a temperature of 155 deg. From the settling kettle it is drawn into a second settling kettle, and finally into the seeding trucks. The seeding trucks must be kept in a room at 90 deg. for 48 hours, when the stearine will have crystalized out and the product be ready for pressing.

The pressed oil is drawn into tierces, and after the bung is closed they are allowed to stand for five days at a temperature of 50 to 60 deg., when the contents will have become grainy. The yield of stock is about 68 per cent. of the fats. In addition to this, one obtains about 11 per cent. of tallow from the settling in the kettles. The entire cost of an equipment for a plant killing 50 cattle a day should not exceed \$1,000, exclusive of the housing of the same.

In case a proposition of this kind is entertained, it will be necessary to use the utmost care in selecting the slaughter fats if a maximum yield of prime oil is desired.



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 Brooklyn Market, 182-184 Ft. Greene Place
 Atlantic Avenue Market, 74-76 Atlantic Avenue
 Ft. Greene Sheep Market, 172 Ft. Greene Place

West 39th Street Market, 668-670 West 39th Street
 Westchester Avenue Market, 769-771 Westchester Avenue
 West Harlem Market, 130th Street and Twelfth Avenue
 Eleventh Avenue Market, Eleventh Avenue, bet. 34th and 35th Streets
 Murray Hill Market, Foot East 31st Street
 West Side Slaughter House } 664-666 West 39th Street
 West Side Market

JERSEY CITY

Wayne Street Market, Corner Wayne and Grove Streets
 Ninth Street Market, 138 Ninth Street

Swift & Company New York

Central Office, Nos. 32-34 Tenth Avenue

COMMERCE WITH PORTO RICO.

Commerce between the United States and Porto Rico during the calendar year 1903 amounted, in round terms, to \$22,000,000. In 1897, the year prior to annexation, it amounted to \$4,162,912, the total for the year just ended being thus more than five times as great as in 1897. This statement of the commerce passing between the United States and Porto Rico is prepared by the Department of Commerce and Labor, through its Bureau of Statistics, and gives the details of the movements, by principal articles, in both directions, both of domestic

and foreign products. It also shows the commerce of Porto Rico with other countries, which amounted to over \$6,000,000, thus making the total trade of the island more than \$28,000,000 in the year just ended.

Of this total of \$22,000,000 between Porto Rico and the United States, \$11,424,313 was domestic products, of the United States shipped to Porto Rico, \$9,986,782 domestic products of Porto Rico shipped to the United States, \$395,582 foreign products shipped from the United States to Porto Rico, and \$166,141 foreign products shipped from Porto Rico to the United States. To other

parts of the world Porto Rico sent domestic products to the value of \$4,267,910 and foreign products to the value of \$127,932, while from other parts of the world Porto Rico imported \$2,119,523 worth of merchandise.

Of the shipments from the United States to Porto Rico were: Provisions, \$1,403,634, of which salted and pickled pork amounted to \$395,363; lard, \$198,870; bacon and hams, \$192,679; cheese, \$98,662, and butter, \$77,407.

See page 48 for the "Wanted and For Sale" department. It may interest you.

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Beef and Pork Packers

Lard Refiners and General Provision Dealers
 For Export and Local Trade

FOR PURCHASING DEPARTMENTS

ONE OF BURT'S MANY SALES.

The Burt Manufacturing Company, Akron, O., have sold the Jones & Laughlin Steel Co. a thirty-inch exhaust head for their plant at Pittsburgh Pa.

WHITE READY FOR BUSINESS.

Thomas H. White & Co., Baltimore, Md., the well-known fertilizer dealers, say:

"We wish to notify you that although we were entirely burnt out in the recent fire, we were fortunate enough to save most of our office records. We have located at 216 N. Gay street, where we are prepared to look after our business as usual. Any inquiries will receive prompt attention."

A HANDY PACKAGE.

The Joseph Dixon Crucible Co., Jersey City, N. J., the well known manufacturer of graphite products, has issued a pamphlet describing their pipe joint compound. This is put up in tubes, easily placed in pocket or tool bag. The qualities of this compound are too famous to require extended mention, but machinists should have a copy of this pamphlet that they may understand how conveniently it is put up.

STURTEVANT'S BOILER PLANT.

The boiler plant of the B. F. Sturtevant Company's new works at Hyde Park, Mass., is now in full operation. This plant comprises three 250-H. P. Stirling boilers, equipped with Jones under-feed stokers, air for which is furnished by a 6 ft. x 28 in. Sturtevant steam fan operating at 2½ oz. pressure, a 9 x 4½ ft. Sturtevant induced draft steam fan, and an economizer, to be installed later, of their own make. The maximum steam pressure carried will be 150 pounds. Fire was started under these boilers on December 23. This company has in process of construction a 400 H. P. vertical compound engine with direct-connected 250 K. W. generating set, which will be the first of several units to be installed in the engine room.

MCCORMICK TO REBUILD.

McCormick & Co., Baltimore, Md., manufacturers of spices, have issued the following letter to the trade:

"It is with regret that we have to advise you of the complete destruction of our magnificent plant and entire stock by the terrible fire that destroyed the business section of our city. The loss was a particularly hard one on us, as it struck us at a time when we were doing more business than ever before in the history of our house. Our January orders were more than double those of any month we have known, and February promised to excel even this splendid record.

"We have secured several large warehouses, and although in rather cramped quarters, as compared with our former modern and complete establishment, we shall be in position to take care of your orders for nearly all our line of goods at once.

"Within a few months we will be able to cater to your needs in a complete and satisfactory manner as before. We have many goods purchased abroad and in transit on the water, and have placed large orders with all our agencies for immediate shipments. We

sincerely thank you for your favors and support given in the past, and call your attention to the fact that all orders sent us at this time will not only help us, but will contribute to the needs of our employees, all of whom have suffered by the fire.

"We are more than grateful to our friends and the trade in general for the many kind expressions of interest and sympathy, and for the many donations sent us for distribution to the needy. We take this means of expressing our sincere thanks for your solicitude, and trust that the future will offer an opportunity to thank you personally.

"While Baltimore has suffered a terrible blow, we shall meet the emergency as becomes men, and with the support of our multitude of friends, we shall rise from our ashes a finer city than before. We hope to have the opportunity of inviting you to inspect our new plant within the next six months. We shall rebuild on our former site a larger and better building, and will equip same in a manner that will keep up the standard our goods have established. 'McCormick Means Merit.'"

VOGT'S DAILY DINNER.

Restaurants in industrial plants are not a novelty, but conducted upon the plan in operation at the great works of the Henry Vogt Machine Co., Louisville, Ky., they are.

The restaurant there is situated in a commodious, bright, cheerful room on the second floor of the office building, the dining room and kitchen being adjacent. In the former there is one long table, neatly spread, there being no attempt at "style," but everything in the equipment being serviceable and attractive.

The service is restricted to the sixteen heads of departments in the plant, and at one end of the table sits Henry Vogt and at the other his brother, Adam.

A casual visitor who would drop into this room any day between 12 and 1 o'clock would think he witnessed the noon-day meal of a big family of men. There is no air of business or of authority to mar the pleasure of the meal. Every one present, including the Vogts, meet as equals, and the discussion turns to every imaginable topic, personal and otherwise. Often banter and joke at the expense of someone present enlivens the talk, or the conversation may turn to topics of the day. But whatever it may be, the spirit of it shows that the daily gathering is a pleasant break in the day's business.

To those who have been fortunate enough to receive an invitation to join the staff it is apparent that much of the success of the company is to be found in the thorough goodwill existing between the head of the business and the department managers. It may be a trifle socialistic in idea, but the Vogt dinner gathering is certainly good for the business.

ANYTHING FOR CO-OPERATION.

The cattle and hog raisers of Wisconsin have formed an association for mutual advantage in line with the organizations recently created in Iowa. They met and decided to call themselves the Corn Belt Meat Producers' Association. They did not like the name, but swallowed it because it was identical with that of the Iowa organization, and they were told

it would be best to name all bodies alike. Their first object will be to secure reform in shipping facilities on the part of the railroads.

BAILEY'S INDEBTEDNESS PAID.

J. S. Bailey & Company, 125-129 Christopher street, New York, send the following letter:

We take pleasure in handing you, in accordance with our agreement of February 25, 1903, the final installment of the amount due you from this company at the time of Mr. Bailey's death, and stating that with this payment the entire indebtedness of J. S. Bailey & Company is completely wiped out, thereby placing the concern on speaking terms with the trade.

We desire also to thank you for the courtesy and confidence extended to our company at the period above mentioned, as it enabled us to effect a full and just settlement, which could not have been accomplished had conditions been otherwise, without entailing a loss of at least 35 per cent. to the creditors.

Expressing the hope that we will continue to merit your good will in our future business relations, we are,

Very truly yours,

J. S. BAILEY & CO.

(Signed) By JOHN E. MCARTHUR,
President.

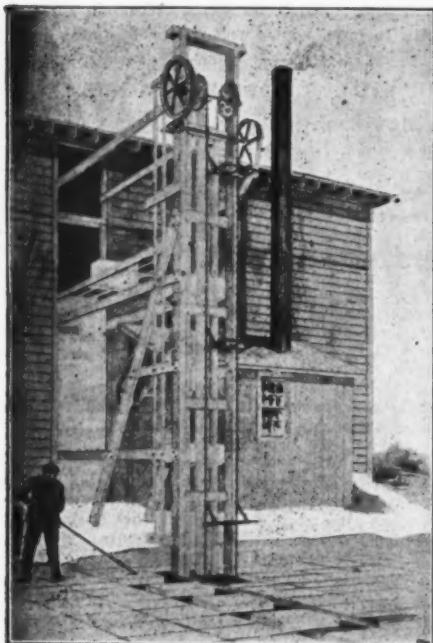
A HINT TO EXPORTERS.

"I have no actual knowledge of even one resident representative of American firms, either in Liege, Brussels, or Antwerp," says United States Consul J. C. McNally, of Liege, Belgium. "I do not doubt for a moment that such representatives are established in these cities, but they have never made known to this consulate their locations. Should a merchant here want information on American goods he will, in the absence of a known representative, come to the consulate and at least expect to be put in touch with the European agent of the firm manufacturing the goods he wants. I must confess that it is a bit humiliating not to be able to give him the address or location of the said agent. I would advise that every American firm having European representatives should supply each consulate with a directory of the same."

NEW PATENTS.

752,477. Ice-Making Apparatus; Hiram Stout, Kingman, Kans. An ice-making plant or apparatus, comprising a plurality of partitions forming compartments adapted each to receive one or more pans for containing a liquid to be frozen, an air-inlet chamber having valved communication with each compartment, and an air-outlet chamber having similar communication with said compartments, said partitions being provided with valve-controlled openings, alternating with each other from one end to the other of the compartments, each valve having an upwardly and outwardly projecting operating-handle and each compartment being provided with a lid.

752,165. Contact Apparatus for Production of Sulphuric Anhydride. Wilhelm Hasenbach, Mannheim, Germany, assignor to Verein Chemischer Fabriken in Mannheim, Mannheim, Germany. A contact element for the production of anhydrous sulphuric acid, consisting of a pair of supporting-frames, a plurality of sheets of platinized fabric, and wire-netting arranged between adjacent sheets of platinized fabric, said fabric and netting being clamped between and supported by said frames.



ICE ELEVATING —AND— LOWERING MACHINE

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Suitable for filling large ice-boxes and for use at Packing Houses.

Readily moved from one door to another.

Write for Catalogue and Price-List, illustrating and describing all modern methods of handling ice.

GIFFORD BROS.
HUDSON, N. Y.

ESTABLISHED 1814

ICE AND REFRIGERATION

CORPORATION NEWS.

Hamilton Ice & Manufacturing Company, Hamilton, Texas; capital, \$20,000. C. Schuwirth, Dallas, Texas; W. A. McSpadden and B. F. Williams, Hamilton, incorporators.

Simon Ice Manufacturing Company, Louisville, Ky.; capital, \$200,000. John E. Simon and others, incorporators.

Seashore Ice Manufacturing & Cold Storage company, Camden, N. J.; capital, \$100,000. H. K. Leech, William H. Wagoner and others, incorporators.

Evanston Ice Company, Evanston, Ill.; capital, \$100,000. Robert Simpson and others, incorporators.

Stockholm Ice, Coal & Produce Company, Portsmouth, Ohio, capital, \$50,000, has been incorporated.

Consumers' Ice & Coal Company, Lexington, Ky.; capital, \$50,000. I. W. Mantle and others, incorporators.

Sherburne Creamery Company, Sherburne, N. Y.; capital, \$10,000. William H. Wild, E. N. Smith and others, incorporators.

Union Creamery & Cheese Company, Eagle, Wis.; capital, \$1,200. Ed Persinger and others, incorporators.

American Butter & Cheese Company, Detroit, Mich.; capital, \$5,000.

North Linn Creamery Company, Central City, Ia.; capital, \$15,000. P. G. Henderson, president.

Burlington Ice Company, Burlington, N. C.; capital, \$20,000. L. Holb, George A. Nicholson and others, incorporators.

Western Produce Company, Arkansas City, Kan., has been incorporated. Wholesale produce and cold storage. L. W. Kennedy, manager.

Templeton Creamery Company, Templeton, Ia.; capital, \$3,000. Henry Stevens and others, incorporators.

Clifton Ice Company, Waynesboro, Tenn.; capital, \$5,000. J. K. Barlow, J. R. Russ and others, incorporators.

Mystic Ice & Coal Company, Lima, O.; capital, \$30,000. U. M. Shappell, W. S. Ayers and others, incorporators.

Palestine Cold Storage & Packing Company, Palestine, Texas; capital, \$20,000. P. W. Ezell, W. M. Lacey and others, incorporators.

Sugar Island Dairy Company, Lebanon, Wis.; capital, \$3,000. William Neitzell, Carl W. Withnabel and others, incorporators.

Huron Condensed Milk Company, New York City; capital, \$100,000. N. F. Weiss, H. W. Utter and others, incorporators.

Frye & Company, Augusta, Me.; capital, \$150,000. Cold storage business. F. L. Dutton, president; E. F. Whittuny, treasurer.

Independent Brewing Company, Seattle, Wash.; capital, \$150,000. Herman Klaber and others, incorporators.

Fort Steel Brewing & Malting Company, Vancouver, B. C.; capital, \$150,000.

Starkville Creamery Company, New York, N. Y.; capital, \$6,000. Oliver H. Spring and others, incorporators.

Wilbur Ice Company, New Orleans, La.; capital, \$20,000. N. W. Wilburn, president; H. B. Schreiber, vice-president; Maury Wilburn, secretary and treasurer.

Spring Valley Creamery Company, Spring Valley, Wis.; capital, \$5,200. John I. Berg, Peter P. Lomo and others, incorporators.

NEW PLANTS.

St. Joseph, Mo.—An ice plant and bottling works will be built. Josiah Scott is interested.

Trenton, Tenn.—A cold storage and ice plant will be built by Robert Johnson.

Santa Ana, Cal.—An ice and cold storage plant will be erected by Santa Fe Railway.

Meriden, Conn.—P. T. Saleski & Co., will build a four story cold store.

Cleburne, Tex.—A large creamery and butter factory will be erected. J. H. Cooley, of Hillsdale, Ill., is interested.

Sacramento, Cal.—The State Commission in Lunacy will build an ice plant at the Stockton Asylum.

FIRE AND ACCIDENT RECORD.

Trenton, Ontario—The large new cold storage warehouse of the Liverpool Apple & Produce Cold Storage & Forwarding Company, recently erected here by Liverpool, Eng., capitalists, was completely destroyed by fire. Six thousand barrels of apples ready for shipment, were also destroyed. The loss is \$60,000, partly insured.

Alpha, Minn.—Creamery destroyed by fire. Loss \$3,000.

Jefferson, O.—Andrews' creamery has been destroyed by fire. Loss \$9,000.

Petersburg, Va.—The plant of the Crystal Ice Company was destroyed by fire on February 10th. Loss \$25,000.

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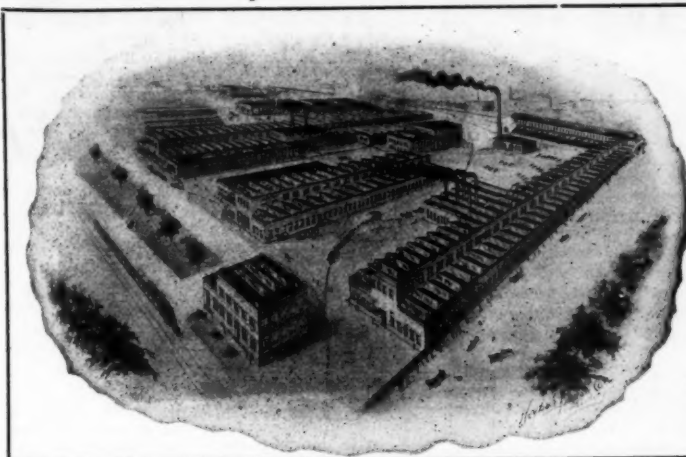
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100 William Street
NEW YORK



Henry Vogt Machine Co.

**ICE and REFRIGER-
ATING MACHINERY**

Louisville, Kentucky.

Chicago, Ill.—Plant of the Peoples' Pure Ice Company has been destroyed by fire. Loss \$15,000.

Cincinnati, O.—Ice plant of the Cincinnati Ice Company has been burned. Loss \$25,000.

Philadelphia, Pa.—Fire damaged the plant of Swift & Company to the amount of \$30,000 on February 13th.

FRESH AND COLD STORAGE BUTTER.

The market on March 2 was steady to firm, and considerable held goods came into New York from interior points during the previous week. More fresh butter arrived and the movement from the coolers was mostly of the higher grades. Held butter was quoted 21@22½c. for extra and 17@20c. for firsts. Prices in New York March 3: Creamery extras, 20c.; do., firsts, 22@25c.; do., seconds, 17@21c.; do., thirds, 15@16c. Creamery held extras, 21@22½c.; firsts, 17@20c.; do., seconds, 15@16c. State dairy, firsts, 20@22c.; do., seconds, 16@18c. Western factory, held, 13@15½c.; packing stock, held, 13@15c. In Boston, the market was firm and cold storage stock came out liberally. The supply of fresh creamery was limited. Extra fresh creamery brought 25½c.; extra storage creamery, 22¼@23c.; firsts, 21@22c. The

stock in cold storage was accorded at 102,771, as compared with 80,434 at same date last year. In Philadelphia, market steady at 26½c., extra creamery; firsts, 23@25c.; held creamery, 18@20c. In Chicago the market was steady at 26c. for extra creamery, and other prices about the same as in the East.

FRESH AND REFRIGERATOR EGGS.

The egg famine has been broken and great quantities of eggs have come in not only from the South and Southwest, but nearby hens have begun to lay, and prices on all sides have rapidly fallen. There has been a drop of 7½ cents since last week's quotation when the highest quoted was 27 cents. The price on March 2d in New York was 19½ cents; 20 cents, for fresh gathered, seconds to firsts. An increased demand has been evident, and the goods moved out freely.

There is much interest felt in the commencement of the season for cold storings which begins within the next three weeks. Prices in the West are still high, and no important contracts are yet reported. Some quotations have been made at 16@17½ cents for large lots to be put in the refrigerators. Last year's record for cold storage eggs was phenomenally high, and the farmers have been giving the most careful attention to production. Great quantities of eggs are being held back for higher prices, with the probable result that the long detention from the coolers will be detrimental to quality and second class goods will find their way into cold storage.

Prices in New York on March 3d: Nearby fresh gathered, 21½c.; do., seconds to firsts, 19½@20½c.; Western do., seconds to firsts, 19½@20½c.; Kentucky, fresh gathered seconds to firsts, 19½@20½c.; Southern, 19½@20c.; dirties, 18@18½c.; checked, 16@17c.

In Boston, the market followed New York, and fresh gathered were quoted at 21½c., and the rest of the quotations were the same.

In Philadelphia, nearby fresh gathered were quoted at 21c., and Southern and Western about the same figure. In Chicago, the market was steady at 19½c. for extras, and 18c. for firsts.

ICE COMPANIES CONSOLIDATE.

The Hoboken Hygeia Ice Company, controlled by the Hoboken Innkeepers' Association, Hoboken, N. J., and capitalized at \$155,000, and the Consumers' Ice Company of Hoboken, whose capital stock is \$500,000, be-

came one company after a meeting of the directors of the Hygeia Company, recently held, in which they agreed to consolidate with the Consumers' concern. The consolidated companies will be known as the Consumers' Ice Company, and the officers of the larger company will remain the same. The directors of the Hygeia Company have signed a statement advising the stockholders of that company to hold their shares.

CUT ICE INTO CUBES.

Herman Reinhold, of Davenport, Ia., who is one of the patentees of the ice chipping machine, has secured still another patent on what he calls an ice cubing machine. The device is devised to cut ice into minute cubes such as are desired in saloons and restaurants. A complicated system of choppers and knives does the work.

A BIG PLANT.

The Beatrice Produce and Cold Storage Company, Beatrice, Neb., which was recently incorporated with a capital stock of \$200,000, expects to erect a cold storage building and ice plant this spring. The business as at present conducted amounted to over a million dollars last year.

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AND
LAMINOID
INSULATING
PAPERS**

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WRITE FOR BOOKLET

NEW YORK: Roessler & Hasslacher Chemical
Co., 100 William Street.

CHICAGO: F. C. Schapper, 16 N. Clark Street.

CINCINNATI: C. P. Calvert, 9 E. Pearl Street.

MILWAUKEE: Central Warehouse.

PROVISIONS AND LARD

Weekly Review

All articles under this head are quoted by the bbl., except lard, which is quoted by the cwt., in tcs., pork and beef by the bbl., or tierce, and hogs by the cwt.

Shaking Out "Longs" at Much Lower Prices —Depressed Conditions Followed by an Improved Tone.

At the beginning of the week there was marked addition to the sentiment which set in with the close of the previous week, over selling at weaker prices.

In Tuesday's trading the break in prices of hog products amounted to 80@82c. per barrel on pork, 45@50 points on lard, and 40@42 points on ribs. On Monday pork had dropped for the day, 75c.; lard 10 points, and ribs 15 points, although at one time of the day there was a decline shown of \$1.15 for pork, 32½@35 points for lard, and 50 points for ribs. On Wednesday there was some recovery of tone and a slight advance in prices. On Thursday the early market farther hardened a little, but prices were not coming up from the decline in the degree that many traders had expected, while before the close there was a sharp break on the packers selling again, with the close showing declines of 52-55 for pork, 25 points for lard and 20 points for ribs.

The breaking up of the "long" interest, in hog products, which had become large and general, has been favored by the steady drop in prices of grain.

The weakness in the hog products began by the dumping of large lines by packers, especially of pork, in one instance, of a line of 10,000 barrels of the May pork. As prices broke, the public, which had been more largely in the pork deal, quitted in an extensive way

their holdings; stop loss orders deluged the market and added to the demoralization.

While an overturning of the hog products market was among the probabilities after the long period of excited upward tendencies, in which there was no disposition anywhere to sell "short," yet there was a good deal of surprise in the trade at the fact that it only took a few hours to do away with substantially all of the advance made through February.

Thus on February 1, May lard was at 7.30; on February 27, it stood at 8.20; two or three days afterward, or in the early part of the week, it was down to 7.40. And May pork, which ran from \$13.02, in a corresponding time, up to \$16.67½, touched on the downward turn of Wednesday of this week, and all of them were down still further on Thursday, or to 7.25 for May lard and \$14.17 for May pork.

Big lines of pork especially have been shaken out, but all around the "long" interest has been narrowed and the packers have the stuff. The market may now be regarded as having a feverish tone.

At the same time it is very doubtful that the public will be for some little time sufficiently confident of bulges on hog products for a resumption of the late excited look to affairs. While we look for a moderate hardening of prices, it is highly improbable that the late high prices will come about again, in the near future, at least. The outside sentiment over buying, before the break, had been encouraged by the war news, and the fear of further political trouble, and this is now tamed.

There was little question but that on the late upward turn of prices that the packers allowed it to take its course, but were selling considerably more than they bought; therefore

it seemed to many of the traders as if the public had the market in their hands.

It was nevertheless hard to understand that there could be a runaway market outside of packers' hands. Our opinion, therefore, that reactions were in order at any time, however favorable some considerations of the market were for a fairly firm line of prices, was justified.

It is a point against the market that the war news now is of an ordinary character, that the stimulation had from it is about exhausted, and that "something new" would have to come along for a marked revival of bullish sentiment.

Nevertheless the prices of the products have been brought down by the recent raiding to a basis upon which statistical and other features come up as influences.

The cash buyers, who had been very careful not to exceed active needs in the period of bullish prices are beginning to take supplies a little more freely. The market is not likely to advance until the "long" interest is thoroughly worked out. Naturally, the next advance will come from the packers and not from the public, and is likely to happen when hog receipts are not large.

The Chicago stocks had increased beyond trade expectations for February; they would not, however, prove at all burdensome with ordinary cash demands. The stock of contract pork is 38,969 barrels (19,700 barrels February 1), 31,000 barrels other pork (32,700 barrels February 1), 58,324 tierces contract lard (16,700 tierces February 1), 21,000 tierces other lard (15,000 tierces February 1), 28,661,000 pounds short ribs (26,600,000 pounds February 1).

The world's visible lard supply is, according to one exhibit (the other not at hand at this writing), 246,286 tierces, against 188,961 tierces February 1, or an increase of 57,000 tierces, against a decrease of 1,370 tierces corresponding time last year.

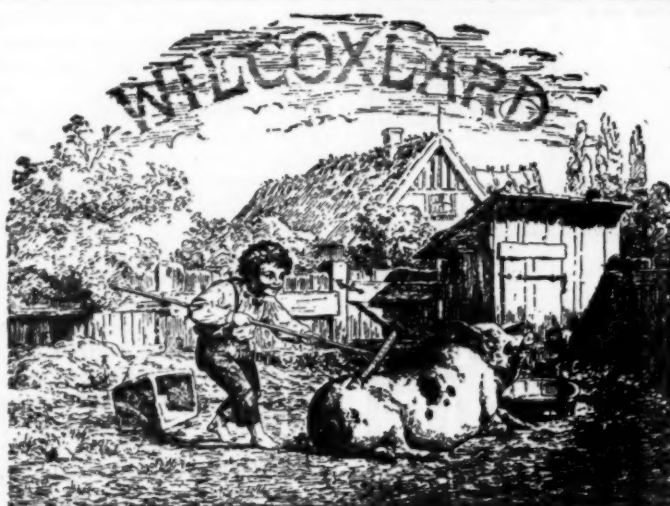
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Easton, Pa.

The live stock receipts have been liberal this week, while in the previous week at Kansas City, Omaha, St. Joseph and Sioux City they reached of hogs, 471,000 head, against 372,000 corresponding week 1903, and 368,700 in 1902, with the highest prices made for the winter packing season.

The previous week's receipts of hogs were the largest of the winter packing season; indeed, for the year, yet because of the products situation then their prices were at an advance and the highest for about four months. This week the hog prices have weakened.

The average weight of the hogs at Chicago last week was 208 pounds, against 207 pounds the previous week, 211 pounds corresponding week in 1903, and 210 pounds in 1902.

In New York there has been rather more demand for western steam lard, with sales at mid-week as low as 7.50 for 400 tierces, and 1,250 tierces on private terms. City steam has sold at 7.25. (Compound lard is at 7.00 for car lots.)

There is a moderate export demand for pork, with sales of 500 barrels at \$15.75 @ \$16.25 for job lots; 250 barrels short clear at \$15 @ \$17; 200 barrels family at \$16.

Sales of 45,000 pounds pickled bellies, 12 pounds, average at 7 1/4 @ 8c., chiefly at 8c.; 7 1/2c. for 14 pounds average, 8 @ 8 1/4c. for 10 pounds average, and smoking bellies at 8 1/4c.; 3,500 loose city pickled shoulders at 6 1/4c.; 3,800 loose city pickled hams at 9 1/4 @ 10 1/4c.; green bellies at 8c.; green hams at 10c.

Exports for the week from Atlantic ports, 4,052 barrels pork, 10,458,263 pounds lard, 12,683,831 pounds meats; corresponding week last year, 2,843 barrels pork; 11,468,200 pounds lard, 10,209,085 pounds meats.

BEEF firmly held at the late advanced prices. City extra mess, tierces, \$16 @ \$17.50; extra mess, barrels, \$9 @ \$10; packet, \$10.50 @ \$11; family, \$11.50 @ \$12.

PRODUCE EXCHANGE NOTES.

Memberships quoted at \$200 bid and \$225 asked.

Proposed for membership: D. Cornell Link (David C. Link, brokerage); Walter Fitch (grain); George Briggs Buchanan (banker); Charles Sherman McKinstry (publisher); Jay Fisk Browne (brokerage).

Visitors: E. J. Powes, London; C. A. Molinari, Hamburg; T. Ashley Kirkpatrick, Glasgow; P. P. Williams, St. Louis; F. Motter, R. F. Lukenan, Kansas City; Walter Fitch, F. Hyde, F. J. Delaney, S. L. Emanuel, C. A. Ramsay, Chicago; J. M. Ardle, George B. Settel, Cleveland.

W. A. McCaw (McCaw Mfg. Co.), Macon, Ga., and Martin M. Schultz, Chicago, were upon the floor of the New York Produce Exchange this week.

Texas leads the list of states in beef cattle, with 8,087,989 head. Montana takes the sheep honors with 5,270,063, and Iowa is the first hog state, with 7,364,268. These government figures are gathered as carefully as possible and are probably fairly correct in their reflection of the situation.



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NEW YORK CHICAGO LONDON

HIDES AND SKINS (Shoe and Leather Reporter.) CHICAGO.

	1904.
Native steers, spready.....	12 1/4 @ 13
Native steers, heavy.....	10 1/4 @ 10 1/2
Native steers, light.....	9 1/4 @ 9 1/2
Texas steers, heavy.....	— @ 11 1/2
Texas steers, light.....	— @ 10 1/4
Texas steers, ex. light.....	— @ 9 1/4
Butt branded steers.....	— @ 10
Colorado steers.....	— @ 9 1/4
Native cows, over 55 lbs.....	— @ 9 1/2
Native cows, under 55 lbs.....	— @ 9 1/4
Branded cows.....	— @ 9 1/2
Native bulls.....	— @ 8 1/2
Branded bulls.....	— @ 7 1/2
Pates, per 100 lbs.....	— @ 85
Trimnings, per 100 lbs.....	— @ 75
No. 1 heavy steers.....	9 @ 9 1/4
No. 2 heavy steers.....	8 @ 8 1/4
Side branded steers, flat.....	8 1/2 @ 9 1/2
Side branded cows, flat.....	7 1/2 @ 8 1/2
No. 1 heavy cows.....	— @ 8 1/2
No. 1 buff hides.....	— @ 8 1/2
No. 1 ex. light hides.....	— @ 8 1/4
No. 2 buff hides.....	7 1/2 @ 7 3/4
Bulls, flat.....	7 1/2 @ 7 3/4
No. 1 calfskins.....	12 1/4 @ 13 1/4
No. 1 kips.....	10 @ 10 1/2
Deacon skins, each.....	65 @ 85
Slunks, each.....	40 @ 60
Horsehides, each.....	3.55 @ —

Sheep Pelts.

Green salted pelts, p'ker lambs.....	1.15 @ 1.30
Green salted packer sheep.....	1.45 @ 1.50
Green salted country pelts.....	85 @ 1.25
Dry pelts, Montana, butchers' full woolled.....	12 @ 12 1/2
Dry pelts, Utah butchers' full woolled.....	11 1/4 @ 12
Dry pelts, Wyoming butchers' full woolled.....	— @ 12
Dry pelts, Colorado and New Mexico, butchers' fair run.....	— @ 11
Dry flint shearlings, good stock.....	10 1/4 @ 11
Dry flint shearlings, damaged.....	3 @ 7
Dry murrains, Montanas and Utahs.....	12 1/2 @ 12 1/4
Dry murrains, Colorado.....	11 @ 12

BOSTON.

Dry—Selected.

Californian.....	21 @ 25.19 @ —
Southern.....	..13 @ 14
San Antonio.....	..18 @ —
Texas.....	21 @ 28.17 @ 17 1/2

Salted.

Brighton abattoir steers.....	9 1/4 @ —
Brighton abattoir steers, butt-branded.....	8 1/4 @ —
Brighton abattoir cows.....	8 1/2 @ —
New England cows, green.....	6 @ 6 1/4
New England cows, salted.....	8 @ 8 1/4
New England steers, salted.....	9 @ —

Wet Salted.

Southern.....	35 @ 40. 7 3/4 @ 7 1/2
Texas ox and cow.....	60 @ 70. 7 1/4 @ 7 1/2
Western cows.....	8 1/2 @ 8 1/4
Western seconds.....	7 1/2 @ 7 3/4
Extremes.....	8 1/4 @ 9
Extremes, seconds.....	7 1/4 @ 8

Calfskins.

QUOTATIONS.

Dairy.....	60 @ 65
4 to 5 lbs.....	80 @ 85
5 to 7 lbs.....	95 @ 1.00
7 to 9 lbs.....	1.25 @ 1.30
9 to 12 lbs.....	1.60 @ 1.65
12 to 16 lbs.....	1.85 @ 1.95
16 to 25 lbs.....	2.20 @ 2.25

NEW YORK.

Selected.

City natives—60 lbs. and over.....	— @ 10
City butt brands—60 lbs. and over.....	— @ 9 1/4
City Colorados—60 lbs. and over.....	— @ 9 1/4
City bulls—all weights.....	8 1/4 @ 8 1/2
City cows—all weights.....	9 @ 9 1/4

City Calfskins.

5-7.....	\$1.12 1/2 @ 1.15
7-9.....	1.40 @ 1.45
9-12.....	1.65 @ 1.70

Country Calfskins.

5-7.....	\$1.00 @ 1.05
7-9.....	1.30 @ 1.35
9-12.....	1.57 1/2 @ 1.62 1/2

TALLOW, STEARINE, GREASE and SOAP

Weekly Review

TALLOW.—The shake up in the lard market this week, especially the marked decline in it on Tuesday, failed to affect the beef fat position more than to make the market for it dull, and perhaps to abate some views of still higher prices, although it was not possible to get supplies at any time in the week under the outside trading basis of the previous week, and the situation may be called a firm one.

The feeling was that the hog fat markets were undergoing forced liquidation, through efforts of the packers to shake out the large long interest that had come in on the general speculation in grain and hog products, and that the pressure against the "longs" was helped by the sharp decline in grain prices. Therefore, expectations were of reactions for the hog products prices, although a good deal of doubt that they will again reach the late high prices, at least for the near future.

And as the course of the hog fat markets has a good deal to do with the beef fat situations, near future developments are awaited all around.

There is no question but that the out-turns of tallow over the country have been larger latterly, as the live stock movement generally has shown a marked increase. But it is considered that consumption of tallow is liberal, that stocks of it are not large over the country, that the manufactured goods business is of very satisfactory volume, and that competing raw materials for use of soapmakers keep at relatively high value, by which there is no prospect of abated consumption of the tallow.

The English tallow situation is, however, watched with a good deal of interest, as it would require only a moderate further advance in the prices for it, to send some demand thence to this country.

The soapmakers over the west have been quiet in buying this week, as having secured

good supplies previously for a few weeks, while waiting for more settled conditions of the general markets.

The supplies of city, hhds., on offer in New York are not material for right away delivery, but there is, of course, a good deal to be sold through the month, although for the first half of the months' delivery not more than 250 hhds. could be obtained.

There has been no sale of city, hhds., over 5½c., but the melters have been asking 5½c., and could further get 5¼c. City, tcs., is nominally 5½c. The city edible is stronger, with sale of 150 tcs. at 5½c., and other makes, out of town lots, have been sold at 5½c. for 200 tcs., but at the close 6 and even 6½c. is asked for the city edible, but bidding of 5½c.

It has been some advantage to the soapmakers to take this edible, of which they had bought freely; but for the moment there is little doing with them. The compound makers are, however, buying the edible a little more freely.

Country made is in moderate receipt and has a fair demand from the soapmakers, while it is seemingly very well taken up to the supply. Sales for the week of 275,000 pounds at 5¼@5½c., as to quality, with some nice kettle lots bringing more money.

The London sale on Wednesday by one cable was at 6d. advance, with 500 casks offered and 200 casks sold, and by another cable "unchanged" with 750 casks offered. The open market there, however, shows the advance.

The Chicago market lately sold at 6c. for prime packers' and at 5½c. for city renderers'.

(Friday's closing markets will be found on page 42.)

OLEO STEARINE.—There were sales at the close of the previous week of 300,000 pounds in New York at 7¼c. Since this the

pressers have been asking 7½c., and have had 7¼c. bid. The late break in the prices of lard did not disturb pressers' views, since they regarded it as the outcome of pressure of packers on the long interest in it, while they look for reactions for the product as soon as there is some falling off in hog receipts. Indeed, a recovery in the lard market is among the probabilities at any time, as speculation may move it, although late outside prices are not likely to be reached in the near future. The compound lard business, which had been of steadily increasing volume, has been a little checked by the more recent developments in the hog fat market.

LARD STEARINE.—Very irregular in price and dull; graded, 7¼@8c.

COCOANUT OIL.—Shows a very strong situation at some advance in prices. The cables are higher. Ceylon, spot, 6¼@7c.; March and April arrivals, 6¾c.; March to May shipments, 6¼@6¾c.; Cochin, spot, 7¼@7½c.; March and April arrivals, 7c.; March to May shipments, 7c.

NEATSFOOT OIL.—There is a little export business in 30 test, but general demands are of a home order and for small lots; 20 cold test, 97@98c.; 30 cold test, 85@86c.; 40 cold test, 67c.; prime, 52@54c.; dark, 46c.

CORN OIL.—The market is held up to the late advance of 4.40, with second-hand lots at 15@20c less money.

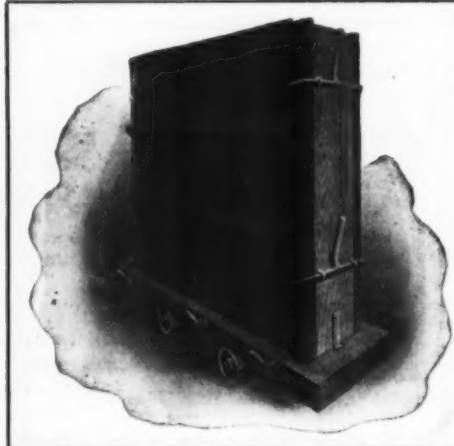
PALM OIL.—Little doing with light stocks and a generally firm situation. Red, 6¼c.; Lagos, 6½@6¾c.

GREASE.—Exporters are doing little outside of taking a few lots of low grades, and the pressers and soapmakers are quieter for the week. Market fairly firm. Yellow, 4¼@4½c.; bone and house, 4½@4¾c.; "B" white, 4¾@4¾c.; fine white, 5¼@5½c.

GREASE STEARINE.—Supplies are not large enough to disturb prices. Demands are moderate. Yellow, 4¾@5c.; white, 5¾c.

OLEO OIL.—The market in Rotterdam was firm for April shipments at 51 florins, but

(Continued on page 42.)



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COTTONSEED OIL

Weekly Review

THE NATIONAL PROVISIONER is an official organ of the Interstate Cottonseed Crushers' Association, and the official organ of the Oil Mills Superintendents' Association of the United States.

Slightly Easier Seaboard Markets, More Especially at New York, Followed Strong Holding Over the South by a Firm Tone.

The market for the refined slackened early in the week in New York, and was about $\frac{1}{2}$ c. lower on deliveries after March and about 1c. lower on March, but recovered a little, with the speculation, but is now a little unsettled on the lower lard market.

Over the South there continued firmness, and which was based upon the statistical position; therefore irrespective of speculative features.

The New York market had been influenced a little this week by the some 6,000 barrels of the oil that came out on the March contracts, and was a little disturbed, perhaps, by the violent break in the prices of pure lard, which was most noticeable in Tuesday's trading.

The deliveries of the oil on contracts were fairly well taken care of, although some portion of them went to store and will be held for expected firmer developments of the market through its favorable statistical features.

There was, however, with the slight weakness on the early deliveries of the refined quite as much desire to sell the May delivery as the intermediate months, although afterwards the March deliveries weakened more, and then reacted to firmness, and was followed again by an easier tendency.

Thus, while in New York early in the week, after sales had been made (close of the previous week) at $39\frac{1}{4}$ @ $39\frac{1}{2}$ c. for 1,000 bbls. prime yellow, March delivery, and at 41c. for 1,500 bbls. May delivery, with 1,000 bbls. July at 41c., the transactions were at $\frac{1}{4}$ c. decline, and included 600 bbls. prime yellow, March delivery, at 39c.; 1,000 bbls. do., April delivery, at 40c., and 3,000 bbls. do May delivery, at $40\frac{1}{2}$ c. There were sales of

800 bbls. prime yellow spot at 39c. The succeeding day (Wednesday) the March delivery in New York settled to $38\frac{1}{2}$ c. for prime yellow with 1,500 bbls. sold at that, and by the close of that day was $38\frac{3}{4}$ c. bid and 39c. asked; there were then sold 500 bbls. April delivery at 40c., and 3,000 bbls. May delivery at $40\frac{1}{2}$ c., closing firm with these prices further bid. There were equal to 2,000 bbls. bleaching grade sold in New York in tanks at $38\frac{1}{2}$ c., and 5 tanks at 37c., and there were 3,000 bbls. bleaching grade sold to the West at 37c. On Thursday prices sagged a little to $38\frac{1}{2}$ @39c. for March, $39\frac{1}{4}$ @40c. for April, 40 @ $41\frac{1}{4}$ c. for May, and 100 bbls. July sold at 41c. (Friday's market on page 42.)

The Southeast mills sold 15 tanks crude at 33c., and some of them, at relatively favorable freight points, got $33\frac{1}{2}$ c. for 7 to 8 tanks.

It is hardly worth while to say anything further about the seed situation. It is now well understood that the left over seed supplies cannot be of volume to change the late opinions as to the degree of the materially modified production for the season, and to which we have alluded to for weeks as the probable development.

The mills now generally feel the probabilities concerning the seed offerings for the remainder of the season; that the second crush may be a little larger than ordinarily from the seed left over from planting is quite probable, but altogether, and in any consideration of the seed supplies, there is not likely to be a material acceleration of the current moderate order of production.

Many of the mills will begin to close up at the end of this month. Some others will, of course, run through April, and a few to a still later period. But in southerly Texas the mills are in good degree closed up for the season.

The mills see no reason to abate any of their late confidence over prices, whatever modification of it has been shown by sales through the week at the seaboard. Indeed, from the situation of supplies and probable

demands many of the mills are looking for even stronger prices.

It is quite probable that some little crude is being held at many points over the South, since the mills have had the market steadily hardening in prices right along, while many of them believe that the limit of high prices will be better shown at a later period of the year; therefore, current developments in fat markets with which cotton oil usually sympathizes, and which ordinarily would perhaps disturb extreme firmness over prices have no influence with the sentiment as to prices as held by the mills.

But it is quite certain that there is much less of the oil than usual held over the South, for this period of the season, since the South has been able for some time to sell large lots of it to the Western compound makers, while many of the mills have been ready sellers at the satisfactory prices, however that some others hold to supplies.

Considering the general movement of the oil from the South to the large consumers direct latterly, and the extent of the business it has had since the beginning of the season, together with the modified order of production, the stocks over the South could not be especially burdensome anywhere. And this makes allowances for the diminished export business for the season. But indeed all of the reports from the South bear out the above deductions.

There is lessened demand for the oil this week from the compound makers in an all around way, although there are instances of compound makers, those at the West particularly remaining in the market, and steadily offering the prices they paid last week for both crude and refined; for the former more particularly in the Valley.

But the compound lard business has lost some of the vitality it had latterly.

There had been up to the beginning of this week a good, healthy growth of the compound lard trading. But since the break in the prices of pure lard naturally all distributors of fats are against stocking up with them for more settled conditions of the lard market.

The more important decline in the prices of lard came in Tuesday's trading, as it then

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amounted to 45@50 points. The succeeding day showed some weakness, followed by firmness; but there had been moderate declines in prices on Monday and the Saturday before for the lard. The further break on lard on Thursday of 25 points was a little disturbing.

It must be considered, however, that substantially all of the advance that had been made in February for the lard was lost in substantially three days' trading this week; thus on February 1 May delivery of lard in Chicago was \$7.30; on February 27 it had reached \$8.20, while on Wednesday of this week it was at \$7.40, and on Thursday it closed at \$7.25.

Of course, violent changes in lard, such as noted, meant nothing more than the results of speculation.

That lard was fairly good property for stronger figures than prevailed at the beginning of February, as on statistical posi-

tions, and that prices, while since advanced to the outside limit on speculation, which harmonized as well with that in wheat and corn, were likely to be upset because the public was extensively on the "long" side of the deal, was well understood. It was easy for the leaders to turn the lard market upon the outside speculators, especially when there was a reason for cheaper products on efforts of packers to obtain larger hog supplies at favorable prices; the bearish movement was as well favored by decidedly lower grain prices.

Therefore, it is not likely that lard will hold down in price, and recoveries in its trading basis may be expected at any time after the "long" interest has been eliminated.

The fact that the Chicago stock of lard had increased to 58,000 tes. through February, against a stock of 16,700 tes. February 1, has no especial significance, since cash buyers had refrained from buying during the period of most excited speculation;

therefore, there are many sources of demand that will have to make freer purchases of the lard, and by which an important hole in its supply will be made. This will happen as soon as the lard market becomes sufficiently settled for courage on the part of the cash buyers.

It is extremely doubtful, however, that the lard market will, in the near future, at least, reach the late outside prices for it, however better it is likely to be as a reaction from the last few days' extreme decline. The lard market, whatever firm features there are to it, must be looked upon as having undergone a strain in the steady advance through February, with the then general speculation, and which covered wheat and corn, with the war news helping it along, and the stimulation from the features has become exhausted, while the public, after being shaken out, comes back slowly on fresh speculative deals.

It is a fact that the consumption of cot-

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COMPOUND LARD.

DALLAS, TEXAS.

ton oil has been lessened this week because of the erratic lard market.

There would seem to be no reason, however, for expectations of prolonged indifference on the part of the compound makers in buying cotton oil, since the lard market promises situations for a freer absorption of the compound lard and ultimately a healthier position than that at present.

It is, of course, true that when market conditions are as upset as badly as those latterly for wheat, corn and lard, and through speculation, that cash buyers who have been timid over taking the actual stuff are made more so for a protracted time, especially in the event of reactions from depressed prices, and as placing their distrust over the influence of speculation. Nevertheless the fats are as freely eaten by consumers and eventually the distributors have to re-supply freely whether it be of the compounds or pure lard; the prognosis of the latter product market favors a very fair diversion, ultimately, of the trading to compounds, and by which there should be returning animation to the cotton oil demands from the compound makers.

We do not see much of a demand this week from the soapmakers for the cotton oil.

The prices of tallow have not been shaken by the lard feverishness, although the trading in it is quieter. City, hhds., tallow, in New York, is at 5½c. bid and 5¾c. asked, and city renderers, in tierces, in Chicago, is at 5¼c. to 5½c. With cotton oil at a little over 5½c. per pound the reason is apparent for quieter than usual demands from the soapmakers for the cotton oil. Of course, there are soapmakers who must have cotton oil in full volume at any price, but there are many soapmakers who use the oil only when it can be had at a very favorable price to them as against the cost of tallow; and these people are now essentially out of the market for it. Cotton oil for a liberal consumption of soapmakers should be ¾¢@1½¢. under the price of the city tallow.

The beef fat position looks fairly secure despite the lard market, and because the soapmakers must have the tallow freely on account of the continued high cost of palm oil, and coconut oil as well as from the situation of the cotton oil statistically and as to its prices; therefore there is no probability of the tallow market ruling in an unfavorable way for the cotton oil market.

There is a little foreign demand for edible grades of cotton oil for the week, more especially for small lots. Some points on the other side continue reselling of their cotton oil contracts, covering not only soap grades but edible qualities.

The Hull (Eng.) market is 3d. higher thus far this week, and quoted at 19s. 9d.

COTTONSEED OIL SITUATION.

(Special Letter to The National Provisioner from Aspegren & Co.)

The refined oil market has been quite interesting during the week. One of the leading concerns have been taking hold of futures

at full prices freely, whereas another leading concern has been depressing the market for nearby deliveries anticipating heavy tenders on March contracts. As a matter of fact pretty near every barrel of oil sold for March delivery was tendered early in the morning of March 1st. Some holders who had deferred the selling of their March oil, hardly had time to turn around and this delivery sold down to 38½c. on realizing, whereas April-May and June deliveries were well supported. The present situation is a warning to holders, never to wait until the last moment with the selling of their oil or with the transfer of same; it pays better to make arrangements for your oil a couple of weeks ahead of the time of delivery.

The heavy decline in lard has naturally been used by the bears as an argument against higher prices, and should lard continue to decline it may have some effect on sentiment.

The crude oil situation, however, is pretty much unchanged. Offerings are very small indeed and the mills now and then only offer a tank or two, while they hold on to the bulk of their oil expecting higher prices. In many cases when they sell a tank of crude oil for prompt they buy a tank of refined oil in New York for May, June, July delivery, as a hedge against it so as to keep their long interest on the market and profit by any advance that might come later on.

We look for a dull market and quote today as follows:

Prime summer yellow cottonseed oil, 39c. asked, 31½c. bid; do, April, 40c. asked, 39½c. bid; do, May, 40½c. asked, 40c. bid; do, June, 40½c. asked, 40½c. bid; do, July, 41c. sales; do, August, 41c. asked, 40c. bid; do, September, 39½c. asked, 38c. bid; do, October, 37½c. asked, 35½c. bid; do, November, 36½c. asked, 35c. bid; do, December, 36c. asked, 34c. bid; prime winter yellow cottonseed oil, 41½c.; prime summer white cottonseed oil, 42c.; Hull quotation of cottonseed oil, 19s. 9d.; crude oil in tanks in the Southeast, 33@33½c.; crude oil in tanks in the Mississippi Valley, 33@33½c.; crude oil in tanks in Texas, 32½@33c.

WANTED AND FOR SALE.

There may be something on page 48 to interest you. Look it up.

TEXAS COTTONSEED OIL MARKET.

(Reported for the National Provisioner by the Texas Cottonseed Crushers' Association.)

Our oil market continues quiet but firm, with 32 freely bid, at which there have been some selling.

Meal good demand, \$22.75 short ton, f. o. b. Galveston.

No other change in our other products.

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LIVE STOCK REVIEWS

CHICAGO.

(Special to The National Provisioner from the Bowles Commission Company.)

CATTLE.—Receipts of cattle the first 3 days this week, 43,190, as compared with 56,730 the same period last week, showing a decrease of 13,540. Total receipts of cattle for the month of February were about 265,704, being without exception the largest receipts on record for the month of February. The supply at the six western markets on Monday of this week was 41,700, against 52,800 a week ago and 36,700 the corresponding day in 1903. Official receipts at Chicago on Monday were 23,508. The quality of the cattle was generally poor and only a small proportion of good cattle were noted in the arrivals. There was nothing good enough to sell at \$6, the top quotation of last week, although a fancy bunch would doubtless have brought the price quite readily; 85 head of 1,584 lb. Kansas steers sold at \$5.60 and several bunches averaging 1,246 to 1,512 lbs. sold at \$5.50, but sales over \$5.25 were comparatively few, owing to the scarcity of the good ones. Bulk of the medium shipping and export cattle sold from \$4.60 to \$5, and plain-er 1,050 to 1,200 lbs. cattle sold largely from \$4.10 to \$4.50, with common light killers down to \$3.25. The market was strong to 10c. higher on good cattle—others steady. Butcher stock was steady, best cows and heifers, \$3.90 to \$4.25. Bulk of the good fat kinds, \$3.25 to \$3.65, with common and medium kinds \$2.60 to \$3.10. Best bulls, \$4. Bulk of the fat grades, \$3.15 to \$3.60. Bolognas, \$2.75 to \$3, and common light bulls, \$1.65 to \$2.35. Canners and cutters largely \$2 to \$2.75. Choice veal calves, \$6.25 to \$6.50. Tops, \$6.75. Stockers and feeders largely \$3.65 to \$4 for the medium to good kinds and best heavy feeders up to \$4.25. Common, light stockers as low as \$2. Milk-ers and springers largely \$30 to \$40. Receipts, Tuesday, 2,682, being the usual Tuesday's run of common cattle and butcher stock. The market was steady, except on medium cows and heifers, which were weak to 10c. lower. Estimated receipts to-day, 17,000. Market active and prices strong to 10c. higher.

HOGS.—Receipts of hogs the first 3 days this week, 104,534, being about 28,000 less than the same period last week. There has been a decided change in the hog market since our last report, and prices to-day are 25c. per cwt. lower than the closing of last week. Receipts on Monday were extremely heavy. The official count for that day being about 50,000, of which number 17,000 were left unsold at the close of the market, with prices for that day about 15c. lower than Saturday. The market grew worse as the day advanced, helped along by a very bad break in the provision market on the Board of Trade. Tuesday's receipts were moderate, being only 17,614. The number carried over, however, from Monday, made 35,000 on the market and with another bad break in the provision market, the hog market closed very weak, with several thousand unsold. To-day's receipts estimated at 28,000, which was considerably less than the trade expected. The demand, however, was very moderate,

and prices were again 10 to 15c. lower. Packers seem determined to break prices, both for live hogs and hog products, and it looks now as though they might be successful for a time at least. Light hogs, which showed the most strength last week, are showing very heavy decline again this week. To-day's market closed very tame, with some left unsold. We quote to-day's prices as follows:

Best heavy and medium weight shippers \$5.35@5.50
Heavy mixed packers 5.25@ 5.40
Mixed hogs 5.05@ 5.25
Selected light hogs 4.85@ 5.20
Pigs 4.00@ 4.50

SHEEP.—Receipts of sheep the first 3 days this week, 69,070, being about 9,000 less than the same period last week. The supply Monday was 40,500. This, together with heavy receipts at both eastern and western markets, broke prices—especially on lambs. The decline in this branch of the trade was 15 to 25c. per cwt. in some cases more severe on medium grades. Sheep, however, were active at about steady to 10c. decline. Tuesday's receipts were moderate, but the market was very dull and draggy, lambs again declining. To-day's receipts estimated at 20,000. The market is steady, with choice lambs scarce and in more active demand than either Monday or Tuesday. Values at the close of to-day's market 15 to 25c. lower than the high time last week on lambs, with sheep 10 to 15c. lower. Choice lambs selling at \$5.75 to \$6. Medium grades, \$5.25 to \$5.75. Choice, heavy wethers, \$4.65 to \$4.75. Medium kinds at \$4.25 to \$4.50. Best ewes, \$4.25 to \$4.35, with fair to good, \$3.90 to \$4.15. Choice, light weight yearlings, \$5.25. Heavy weights around 5c. The demand for feeding lambs active, with prices ranging \$4.75 to \$5.

KANSAS CITY

(Special to The National Provisioner.)

CATTLE.—Receipts this week, 28,400; last week, 34,900; same week last year, 27,000. Practically all grades of cattle have sold strong to 5 or 10c. higher each day during the past week. Best fat steers have gained 25c. top, 5.25 medium. Beef steers sell from 4.24 to 4.75 and have gained 30 to 40c. during the week. Butcher stuff, including cows, have put on 20 to 30c.; bulls not so much, and veal calves are firm but no higher than last week. The best bring 6.25. Stockers and feeders have gained 30 to 40c.; the demand is good.

HOGS.—Receipts this week, 44,700; last week, 60,600; same week last year, 24,500. Hog prices have been weak each day since Saturday, except yesterday, when a moderate gain was made, but not held very well. Prices average 20 to 30c. under a week ago, mostly on light weights. More light weights have arrived this week than formerly, although quality has held good. The market to-day is barely steady with yesterday; top, 5.40; bulk of sales, 5c. to 5.30. Heavy hogs bring 5.30 to 5.40.

SHEEP.—Receipts this week, 24,200; last week, 27,500; same week last year, 16,500. Quality of sheep and lambs has averaged better this week than last, and prices are as good as at any time this season, except on lambs and yearlings. Receipts are easily disposed of at 5.50 to 5.70 for best lambs; 5.20 for yearlings; wethers, 4.60; ewes, 4.25. The percentage of yearlings and lambs is large, and dealers here expect this condition to continue.

HIDES are unchanged. Green salted, 7c.; side brands, over 40 lbs., 6½c.; under 40 lbs., 6c.; bulls and stags, 6c.; half uncured, 1c. less.

Packers' purchases this week:

	Cattle.	Hogs.	Sheep.
Armour	3,754	19,227	5,678
Cudahy	3,426	9,689	2,147
Fowler	1,074	2,871	1,803
Ruddy	532	144	400
Schwarzschild	2,672	6,204	3,323
Swift	3,612	9,066	8,237

ST. JOSEPH

(Special to The National Provisioner.)

Although receipts of cattle have been fairly liberal here thus far this week, so strong is the demand from dressed beef men and on export and shipping account that sellers experienced no trouble in advancing prices 15 to 25c. with Thursday. Cows and heifers met with ready sale on a firm basis. Stockers and feeders sold readily on a strong to 10c. higher plane.

Under liberal marketing at all points, as well as here, packers succeeded in breaking the market on each day thus far this week, although the demand from all of the buyers was on the urgent order at the lower range of values. They continue to discriminate against the light weight offerings in favor of the heavy weights.

The movement of sheep and lambs from the feed lots of Colorado is now on in full blast, the big end of the liberal supplies here this week being from that State, although natives and Nebraska fed stock came in more freely than the past two weeks. The demand was good from all of the buyers. Owing to the bad conditions east, buyers insisted on a lower range of values, which they succeeded in securing, the decline being mostly 10 to 15c. on both mutton grades and lambs with the close of last week.

CATTLE SLAUGHTERED.

Special reports to The National Provisioner show the number of cattle slaughtered at the following centers for the week ending February 27:

Chicago	38,802
Kansas City	17,019
St. Joseph	9,143
St. Louis	14,823
Cudahy	450
Sioux City	872
Wichita	320
New York and Jersey City	6,932
Fort Worth	4,115
Detroit	582
Buffalo	10,500

HOGS SLAUGHTERED.

Special reports to The National Provisioner show the number of hogs slaughtered at the following centers for the week ending February 27:

Chicago	177,160
Kansas City	60,390
St. Joseph	49,486
St. Louis	36,092
Cudahy	7,564
Sioux City	13,454
Ottumwa	18,700
Cedar Rapids	20,121
Wichita	8,440
Nebraska City	8,485
Bloomington	2,525
Indianapolis	13,862
New York and Jersey City	34,874
Fort Worth	8,401
Detroit	3,846
Buffalo	31,670

SHEEP SLAUGHTERED.

Special reports to The National Provisioner show the number of sheep slaughtered at the following centers for the week ending February 27:

Chicago	75,034
Kansas City	21,887
St. Joseph	16,792
St. Louis	10,543
Cudahy	200
Sioux City	21
Wichita	24
New York and Jersey City	19,492
Fort Worth	1,133
Detroit	1,531
Buffalo	67,700



CHICAGO SECTION



Charles E. Calm, of the Preservaline Company will go East this week.

Fred W. Wilder is contemplating a trip to New York and the East in connection with one of his projects.

O. M. Garrett, who was formerly with Bird & Son, of Neponset fame, is now engaged in the railroad supply business.

H. Boore & Co. report that they have passed through a very profitable season and that the outlook for spring is very encouraging.

The renovations which are going on at the plant of Roberts & Oake are said to be a preliminary to its absorption by one of the larger packers.

W. B. Allbright returned to Chicago in time to take charge of the management, as B. F. Nell was confined to his home with a throat ailment.

George J. Brine, of Armour & Company, is taking a well-earned recreation at Jacksonville, Fla. It is hoped by all who have the pleasure to know Mr. Brine that he will return to Chicago greatly benefited by his short sojourn in that Southern clime.

As contraband of war has not been fully defined by the billigerents of the Russian-Japanese war, and there may be no final decision for a long while, the packers are naturally averse to allowing any information concerning their sales and shipments to either government to become public property.

Walter Wellman's interesting correspondence in the Record-Herald of March 2d, concerning Representative Martin's resolution and speech relating to the proposed investigations into the disparity between the price of cattle and beef was the talk of the town. The packers view this movement with indifference and believe that a fair investigation will show that the cattlemen have no just grievance against the packers. The public at large does not seem at all concerned in this controversy.

Patrick Cudahy, of the Cudahy Packing Company, Wisconsin, says: "There is nothing to the provision market except a buying craze that seems to have taken possession of a great many speculators because of this Russo-Japanese war. There has never been a war within my recollection when everybody did not feel it his duty to buy something. Every man with four or five children appears to think it necessary to lay in four or five barrels of flour. When the snow is

gone and the birds are here there will be a change in sentiment. It is hard to understand why this war should have any effect on the price of provisions. The Jap does not eat our product. The Russian has enough of his own. But there is something about a war that affects people almost to a mild form of insanity, and the first impulse is to buy something. The small speculators are taking the produce now; the packers are generally doing the selling. I think it will turn out there will be \$6 or \$7 in selling this pork. It is quite possible we will have 1,000,000 more hogs this summer than we had last. The farmer seems to be making his hogs in the summer now instead of in the winter, as he used to, probably because he has learned they fatten quicker.

"We will show on March 1 twice as much pork, double as many ribs and four times as much lard as we had a year ago. There is the prospect of a large supply of summer hogs, and none too good a consumptive demand. England at the present time is almost 2c. per lb. below what it would cost to manufacture produce suitable for that market. The trade with the South is not any too good. I can not see anything ahead for the man who buys provisions at the prevailing prices to-day except grief. Last year ribs and lard were taken care of by two of the largest houses in the country, yet ribs sold at about 6 3/4c. in October, lard at 6 1/4c. and pork at \$11 per barrel. Of the three lard, I think, is to-day the best property.

After a long and stormy session, in which one alderman was challenged to personal combat, the subcommittee of the council judiciary

committee decided to abandon the zigzag plan for boundaries for a rendering plant district and recommended essentially the stockyards district for these factories, practically as suggested by the Civic Federation. Citizens virtually stormed the meeting in the council committee-room. Sixteen plants will have to be removed and established in the suggested district if the measure is approved by the council. The district recommended is bounded by Thirty-ninth, Butler and Forty-seventh streets and a zigzag line with Paulina street as the furthestmost western boundary.

The 16 plants affected are: Omaha Packing Company, Halsted street and river; Armour Glue Works, 3131 Benson street; McGurl & Sons, 3140 South Western avenue; H. Dettmeier & Co., Thirty-second and Robey streets; Scannell & Co., Thirty-second and Robey streets; Arnold Brothers, 145 West Randolph street; Joseph Lister & Sons, 1158 Elston avenue; John Fitzpatrick & Co., 424 South Canal street; Fitzpatrick Brothers, 1052 Thirty-second street; O'Rourke & Gossman, 1406 Thirty-eighth place; O. F. Meyer & Brothers, 289 Sedgwick street; Stopp Packing Company, Green street and Milwaukee avenue; G. Obenuap, 472 West Chicago avenue; A. Stern & Co., 2621 Quinn street; J. A. Dohmka, 988 West Lake street; Diamond Glue Company, Robinson avenue and Canal street.

FISH NOT BRAIN FOOD.

The belief that fish is a brain food, says the London "Lancet," is about as reasonable as the idea that because a soup is thick it will stick to the ribs.

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for the butcher, and
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Specify
LUNKENHEIMER
Automatic Injectors
"Tried and tested"

STOCKS OF LARD

Cable advices give the following estimates of the stocks of lard held in Europe and afloat, on March 1, to which are added estimates of last year, and stocks in cities named:

	1904.	1904.	1903.
	March 1.	Feb. 1.	March 1.
Liverpool and Manchester.....	30,000	15,000	13,500
Other British ports.....	8,000	2,200	3,500
Hamburg.....	12,000	16,000	15,000
Bremen.....	1,000	1,000	2,000
Berlin.....	2,500	2,500	2,000
Baltic ports.....	11,500	9,500	10,000
Amsterdam, Rotterdam, Mannheim.....	1,200	500	2,000
Antwerp.....	3,000	3,000	7,500
French ports.....	1,800	1,800	500
Italian and Spanish ports.....	500	500	500
Total in Europe.....	71,500	52,000	56,500
Afloat for Europe.....	50,000	65,000	50,000
Total in Europe and afloat.....	121,500	117,000	106,500
Chicago prime steam.....	58,324	16,760	12,293
Chicago other kinds.....	21,419	15,235	12,011
East St. Louis.....	1,725	1,000	None
Kansas City.....	13,157	6,756	6,423
Omaha.....	4,290	2,385	3,703
New York.....	6,934	9,095	6,525
Milwaukee.....	6,634	3,683	862
South St. Joseph.....	5,970	4,190	2,694
Total tierces.....	239,953	176,174	151,011

RECEIPTS AT CENTRES.

SATURDAY, FEBRUARY 27, 1904.			
	Cattle.	Hogs.	Sheep.
Chicago.....	800	20,000	1,000
Kansas City.....	75	9,800	750
Omaha.....	200	5,000	.....
St. Louis.....	.....	.....	.....
MONDAY, FEB. 29, 1904.			
Chicago.....	24,000	50,000	25,000
Kansas City.....	7,000	8,000	5,000
Omaha.....	2,500	6,200	17,500
St. Louis.....	.....	.....	.....
TUESDAY, MARCH 1, 1904.			
Chicago.....	3,000	20,000	10,000
Kansas City.....	11,000	13,000	5,000
Omaha.....	3,600	8,300	11,000
St. Louis.....	3,000	8,500	2,000
WEDNESDAY, MARCH 2, 1904.			
Chicago.....	17,000	28,000	20,000
Kansas City.....	5,000	8,000	3,000
Omaha.....	3,500	6,500	9,200
St. Louis.....	4,500	8,500	3,500
St. Joseph.....	1,600	4,000	2,000
THURSDAY, MARCH 3, 1904.			
Chicago.....	8,500	20,000	18,000
Kansas City.....	3,000	8,000	1,000
Omaha.....	2,600	4,000	6,700
St. Louis.....	.....	.....	.....
FRIDAY, MARCH 4, 1904.			
Chicago.....	2,500	18,000	7,000
Kansas City.....	2,000	5,000	2,000
Omaha.....	2,800	5,300	5,500

CHICAGO STOCK YARDS RECEIPTS AND SHIPMENTS.

RECEIPTS.			
Wednesday, Feb. 24.....	24,645	768	46,579
Thursday, Feb. 25.....	7,255	471	38,483
Friday, Feb. 26.....	2,142	456	34,884
Saturday, Feb. 27.....	526	8	18,900
Monday, Feb. 29.....	23,508	666	58,920
Tuesday, March 1.....	2,682	1,368	17,614
Wednesday, March 2.....	17,000	700	28,000
Total last week.....	66,653	3,733	224,948
Same week last year.....	61,384	4,163	179,385
Year ago this week.....	59,945	3,392	115,040
SHIPMENTS.			
Wednesday, Feb. 24.....	5,516	55	9,023
Thursday, Feb. 25.....	6,190	32	7,691

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ALL IRON TANK
COCKS, D & D Pat'ern

HAM and LIVER
NEEDLES

BRASS and IRON
GOODS.

PROVISION LETTER.

(Special Letter to The National Provisioner from C. D. Forsyth & Co.)

We quote to-day's market as follows:
Green hams, 10@12 ave., nom. 9½c.; do, 12@14 ave., nom. 9½c.; do, 14@16 ave., nom. 9½c.; do, 18@20 ave., nom. 9½c. Green picnics, 5@6 ave., nom. 6½c.; do, 6@8 ave., nom. 6½c.; do, 8@10 ave., nom. 6½c.; do, 10@12 ave., nom. 6½c. Green N. Y. shoulders, 10@12 ave., nom. 6½c.; do, 12@14 ave., nom. 6½c. Green skin hams, 18@20 ave., nom. 10½@10¾c. Green clear bellies, 8@10 ave., nom. 10½c.; do, 10@12 ave., nom. 10c.

CHICAGO HOG PURCHASES.

For the week ending February 27, 1904:

Anglo-American.....	21,000
Armour & Co.....	47,800
Boore & Co.....	5,800
Boyd & Lunham.....	6,900
Continental Co.....	6,800
Morris & Co.....	18,600
National Packing Co. (Hammond Co.).....	8,000
Roberts & Oake.....	2,000
Schwarzschild & Sulzberger Co.....	9,200
Swift & Co.....	37,500
City Butchers.....	36,500

Total.....200,700

CHICAGO PROVISION MARKET

RANGE OF PRICES.

SATURDAY, FEB. 27, 1904.				
	Open.	High.	Low.	Close.
LARD—(Per 100 lbs.)—				
May.....	8.05	8.05	8.00	8.05
July.....	8.17	8.20	8.13	8.20
RIBS—(Boxed 25c. more than loose)—				
May.....	8.02	8.02	8.00	8.02
July.....	8.07	8.10	8.03	8.07
PORK—(Per barrel)—				
May.....	16.25	16.37	16.20	16.32
July.....	16.42	16.42	16.25	16.40
MONDAY, FEB. 29, 1904.				
LARD—(Per 100 lbs.)—				
May.....	7.92	7.95	7.65	7.87
July.....	8.05	8.10	7.82	8.05
RIBS—(Boxed 25c. more than loose)—				
May.....	7.90	7.92	7.47	7.82
July.....	7.95	8.02	7.57	7.90
PORK—(Per barrel)—				
May.....	15.80	16.00	14.95	15.37
July.....	15.80	16.00	14.95	15.42
TUESDAY, MARCH 1, 1904.				
LARD—(Per 100 lbs.)—				
May.....	7.75	7.80	7.40	7.45
July.....	7.92	7.95	7.52	7.56
RIBS—(Boxed 25c. more than loose)—				
May.....	7.70	7.80	7.40	7.40
July.....	7.82	7.87	7.50	7.50
PORK—(Per barrel)—				
May.....	15.65	15.65	14.50	14.50
July.....	15.35	15.42	14.50	14.60
WEDNESDAY, MARCH 2, 1904.				
LARD—(Per 100 lbs.)—				
May.....	7.40	7.50	7.32	7.47
July.....	7.47	7.67	7.47	7.65
RIBS—(Boxed 25c. more than loose)—				
May.....	7.37	7.50	7.32	7.45
July.....	7.47	7.60	7.40	7.55
PORK—(Per barrel)—				
May.....	14.45	14.82	14.37	14.72
July.....	14.60	14.87½	14.45	14.82
THURSDAY, MARCH 3, 1904.				
LARD—(Per 100 lbs.)—				
May.....	7.52	7.55	7.20	7.25
July.....	7.67	7.70	7.37	7.37
RIBS—(Boxed 25c. more than loose)—				
May.....	7.50	7.55	7.20	7.25
July.....	7.62	7.62	7.27	7.35
PORK—(Per barrel)—				
May.....	14.82	14.82	14.07	14.17
July.....	14.92	14.92	14.17	14.30
FRIDAY, MARCH 4, 1904.				
LARD—(Per 100 lbs.)—				
May.....	7.22	7.35	7.20	7.25
July.....	7.40	7.50	7.37	7.37
RIBS—(Boxed 25c. more than loose)—				
May.....	7.25	7.35	7.07	7.07
July.....	7.35	7.42	7.20	7.22
PORK—(Per barrel)—				
May.....	14.20	14.30	13.80	13.92
July.....	14.32	14.40	13.95	14.07

MUMFORD'S POINTS FOR CATTLE FEEDERS

One of the most interesting and thorough experiments in the feeding of beef cattle for market was that conducted by Prof. Herbert W. Mumford, at the Illinois agricultural experiment station, the general results of which were published in *The National Provisioner* last month. The experiment station has now issued Prof. Mumford's report on this experiment in full, with complete tables and illustrations of the animals in various stages of development.

In drawing his conclusions Prof. Mumford takes occasion to declare emphatically that stock raisers cannot expect to make their own market prices, no matter what scheme they adopt. "It is obvious," he says, "that cattle feeders cannot control the markets for their cattle. They should understand fully, however, the bearing which market conditions have upon the question of what grade of feeding cattle is likely to return to the feeder the greatest profits in any given year."

In other words, if the stock grower will stop running after the false gods of the independent packing plant schemer, and pay more attention to the best method of cattle feeding for market, he will in the end come out with a better showing for his pains.

Prof. Mumford summarizes his work in part as follows:

OBJECT.—To determine the relative rapidity, extent, nature and cost of gains with the six grades of feeding cattle, viz., fancy selected, choice, good, medium, common, and inferior.

PLAN.—Sixteen steers of each grade were fed alike from November 29, 1902, to May 27, 1903, a period of 179 days. Four pigs followed each of the six lots of steers. The feeds used were cracked corn, corn and cob meal, cottonseed meal, old process linseed oil meal, clover hay, alfalfa, timothy hay, and corn stover.

RAPIDITY OF GAINS.—Average daily gain per steer in pounds: Fancy, 2.57; choice, 2.54; good, 2.34; medium, 2.13; common, 2.21; inferior, 1.96. Total gain in pork in pounds for each lot: Fancy, 419; choice, 500; good, 475; medium, 520; common, 420; inferior, 480.

ECONOMY OF GAINS.—Average digestible dry matter in pounds required for producing a pound of gain in beef: Fancy, 9.95; choice, 12.09; good, 12.08; medium, 13.05; common, 12.00; inferior, 12.93. Number of pounds gain per bushel of corn consumed: Fancy, 9.74; choice, 7.97; good, 7.99; medium, 7.45; common, 8.13; inferior, 7.61.

COST OF GAINS PER POUND, AVERAGE.—Fancy, \$0.067; choice, \$0.082; good, \$0.082; medium, \$0.088; common, \$0.081; inferior, \$0.087.

NATURE OF GAINS.—As a result of feeding the 16 fancy feeders until finished there was only one steer that would not grade as prime. This steer lacked slightly in quality, but principally in condition, and graded as choice. After slaughtering, the beef experts in Amour & Co.'s city beef department graded all the carcasses as No. 1.

Of the 16 choice feeders fourteen finished as prime, one as choice, and one as good. All the carcasses graded as No. 1 beef. Of the 16 good feeders three finished as prime, five as choice, and eight as good. All the carcasses

graded as No. 1. Of the 16 medium feeders one finished as choice, four as good, eight as medium, and three as common. Four of the carcasses in this lot graded as No. 1 light and the remainder as No. 2 tops. Of the 16 common feeders five finished the test as good, six as medium and five as common beefees. The grading of the beef was the same as that in lot 4, namely, four carcasses graded as No. 1 light, and twelve as No. 2 tops. Of the 16 inferior feeders four finished as good, six as medium, and six as common. Six carcasses graded as No. 1 light, nine as No. 2 tops, and one as No. 3 beef.

PERCENTAGES OF DRESSED BEEF.—Average percentage carcass to live weight: Fancy, 61.62; choice, 61.52; good, 60.74; medium, 59.70; common, 59.88; inferior, 59.36.

PROFIT AND LOSS.—Market value as feeders November 29, 1902: Fancy, \$4.75; choice, \$4.55; good, \$4.20; medium, \$3.85; common, \$3.60; inferior, \$3.35 per hundred weight.

Market Value of Finished Cattle on Basis of Steady Market from November 29, 1902, to May 28, 1903.—Fancy, \$7.00; choice, \$6.90; good, \$6.50; medium, \$5.80; common, \$5.50; inferior, \$5.40.

Profit per Steer on Basis of Steady or Stationary Market.—Fancy, \$18.15; choice, \$15.67; good, \$11.56; medium, \$4.41; common, \$4.09; inferior, \$5.48.

RUSSIA'S COMMERCE DEPARTMENT.

The scope of Russia's new department of commerce and navigation is seen in its relation to other ministries, says United States Commercial Agent Greener, of Vladivostok, Siberia. It has representation in the councils of railroad administration and rates, in the different railroad communities, in the direction of all matters of internal water ways and roads, in the committee having charge of tariff matters, and in railroad building, governmental and private. Reciprocally, representatives of other ministries are to have a seat in the committee of mercantile marine. A representative of the ministry of foreign affairs will be present when international questions are discussed and decided. It will be readily seen how important such a department may become in facilitating the dispatch of certain matters, where the formalities of presentation, reference, confirmation, reporting back, etc., tend to delay. The convenience is already evident in the tariff department and in the various railroad interests.

By a decree of June 25, 1903, the board was officially created. Among its functions are: (1) To lay the foundation of improved shipbuilding yards for repair of vessels; (2) to build new ports, harbors, and quays; (3) to foster shipbuilding and navigation—in short, to do everything which may be done to assist in the development of the Russian mercantile marine so as to render it independent of foreigners.

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COTTONSEED OIL IS INDISPENSABLE.

The consumption of table oil in Hungary is very large and American cottonseed oil is an indispensable article, says Acting Consular Agent La Guardia in a recent report. The wholesale dealers are continually complaining that it is impossible for them to buy from American exporters, but are forced to buy from Trieste agents, much to their own disadvantage. The city of Fiume alone consumes yearly 10,000 barrels of cottonseed oil. If direct communication could be started this amount would increase manifoldly, owing to the Hungarian and oriental (Servian and Roumanian) markets, which would easily be gained.

This year's olive crop in Dalmatia and Spain is reported to be very favorable, and low prices are foretold for the coming season. The quality, however, is not up to the standard and American cottonseed oil will be used, as usual, to blend it. Pure olive oil is now an article of the past; the modern palate can not bear it. If the proposed new Austro-Hungarian tariff be put into effect without modification the import of cottonseed oil may suffer some, but it is universally believed that the duty on cottonseed oil will be lowered. American exporters may rest assured that the importers on this side are doing their best to that effect.

BRITISH SLAUGHTER INQUIRY.

A departmental committee has been appointed by the British Government to consider the most humane and practicable methods of slaughtering animals for food. Arthur Lee, M. P., Civil Lord of the Admiralty, is chairman of the committee, which includes representatives of the Admiralty, the War Office, the Board of Agriculture, the Corporation of London and the London County Council. The committee will visit the great abattoirs at Deptford to see every kind of process that is at present employed in slaughtering animals. With the committee will go Professor Starling, the eminent veterinary surgeon, who will give expert opinion as to the length of time the animals take to die. Just what is the object of this inquiry, in view of the admittedly scientific methods of slaughtering now in vogue, is hard to determine.

SEE PAGE 48 FOR
Wanted and For Sale Advertisements

MARKET PRICES.

CHICAGO.

FERTILIZERS.

Dried blood, per unit.....	@ 2.50
Hoof meal, per unit.....	@ 2.20
Concent. tank, 15 to 105 per unit.....	@ 2.15
Ground tank, 10 to 115 per unit.....	2.25 @ 10c.
Unground tank, 10 to 115 per unit.....	2.10 @ 10c.
Unground tank, 9 and 205, ton.....	21.00
Unground tank, 6 and 305, ton.....	14.50
Ground raw bone, per ton.....	22.00
Ground steam bone, per ton.....	18.00

HORNS, HOOFS AND BONES.

Horns, No. 1, 65 to 70 lb., avg. ton.....	\$275.00
Horns, black, per ton.....	25.00
Horns, striped, per ton.....	28.00
Horns, white, per ton.....	45.00
Round shin bones, 35 to 40 lb., avg. ton.....	45.00
Round shin bones, 50 to 55 lb., avg. ton.....	40.00
Long thigh bones, 90 to 95 lb., avg. ton.....	35.00

LARDS.

Choice prime steam.....	@ 7.30
Prime steam.....	@ 8 1/4
Neutral.....	@ 8 1/4
Compound.....	@ 6 1/4

STEARINES.

Oleo.....	7 1/4 @ 7 1/4
Lard.....	@ 8
Grease, W.....	@ 5 1/4
Grease, B.....	@ 5 1/4
Grease, Y.....	4 1/2 @ 5

OILS.

Lard Oil, extra winter strained tes.....	63
Lard Oil, extra, No. 1.....	40
Lard Oil, No. 1.....	37
Lard Oil, No. 2.....	35
Oleo Oil, extra.....	54 @ 5 1/4
Oleo Oil, No. 2.....	53 @ 5
Neatsfoot Oil, pure.....	@ 70
Neatsfoot Oil, No. 1.....	65

TALLOW.

Packers' prime.....	5 1/4 @ 6
No. 2.....	4 1/2 @ 4 1/2
Edible.....	6 @ 6 1/4
City renderers.....	5 1/4 @ 6 1/4

GREASE.

Brown.....	4 1/2 @ 4 1/4
Yellow.....	@ 4 1/4
White, A.....	5 1/4 @ 5 1/4
Bone.....	@ 4 1/2

CURING MATERIALS.

Bedford saltpetre.....	4 1/2 @ 5 1/4
Boracic acid, crystal to powdered.....	10 1/4 @ 11 1/4
Borax.....	7 1/4 @ 8
Sugar—	
Pure, open kettle.....	3 1/4
White, clarified.....	4
Plantation, granulated.....	4 1/4
Yellow, clarified.....	3 1/4

Salt—	
Ashion, in bags, 224 lb.....	\$2.40
Eng. packing, in bags, 224 lb.....	1.50
Michigan, medium, car lots, per ton.....	3.00 @ 3.50
Michigan, granulated, car lots, per ton.....	2.65
Casing salt, bbls., 280 lb., 2X and 3X.....	1.10

COOPERAGE.

Tierces.....	\$1.37 1/4 @ 1.40
Barrels.....	1.07 1/4 @ 1.10

BUTCHERS' WHOLESALE PRICE LIST.

CORNER, BOILED AND ROAST BEEF.

1 lb. 2 doz. to case.....	Per doz. \$1.30
2 lb. 1 or 2 doz. to case.....	2.40
4 lb. 1 doz. to case.....	4.85
6 lb. 1 doz. to case.....	8.00
8 lb. 1 doz. to case.....	18.00

EXTRACT OF BEEF.

1 oz. jars 1 dozen in box.....	Per doz. \$2.25
2 oz. jars 1 dozen in box.....	3.55
4 oz. jars 1 dozen in box.....	6.50
8 oz. jars 1 dozen in box.....	11.60
6 oz. jars 1/2 dozen in box.....	22.00
2, 5 and 10 lb. tins.....	\$1.75 per lb.

BARRELED BEEF AND PORK.

Extra plate beef.....	\$10.00
Plate beef.....	9.50
Extra mess beef.....	9.50
Prime mess beef.....	10.00
Beef hams.....	Not Quoted.
Mump butts.....	9.50
Mess pork, repacked.....	18.75
Extra clear pork, Long Cut.....	17.25

DRIED BEEF PACKED.

Ham sets.....	12 1/4
Insides.....	14
Outsides.....	11 1/4
Knuckles.....	13
Reg. clogs.....	10

SMOKED MEATS PACKED.

A. C. Hams.....	12 1/4
Skinned Hams.....	12 1/4
Shoulders.....	8 1/4
Picnics.....	8 1/4
Breakfast Bacon.....	15 1/4

LARD.

Pure leaf, kettle rendered, per lb., tes.....	9 1/4
Lard substitute, tes.....	7 1/4
Lard compound.....	7 1/4
Barrels.....	1/2c. over tes.
Half barrels.....	1/2c. over tes.
Tubs, from 10 to 80 lb.....	1/2c. to 1c. over tes.

BUTTERINE.

F. O. B. CHICAGO.

No. 1, natural color.....	@ 10
No. 2, " " " ".....	@ 11 1/4
No. 3, " " " ".....	@ 12
No. 4, " " " ".....	@ 13
No. 5, " " " ".....	@ 14
No. 6, " " " ".....	@ 15

BOILED MEATS.

Hams, boneless.....	16 1/4
California, boneless.....	10 1/4
Boiled shoulders.....	10 1/4

DRY SALT MEATS.

Rib bellies.....	\$ 00 @ 10.00
Short clears.....	7.37 1/4 @ 8.12 1/4
Plates, regular.....	7.37 1/4 @ 8.12 1/4
American shoulders.....	

SAUSAGE CASINGS.

Beef round, set of 100 ft.....	12
Beef middles, set of 57 ft.....	35
Beef bungs, each.....	7
Hog casings, per lb free of salt.....	
Hog bungs exports.....	
" medium, each.....	
" small, each.....	
Sheep casings, per bundle.....	

SAUSAGES.

Summer, H. C.....	16
German Salami.....	13
Holsteiner.....	11
D'Arles H. C.....	18
Italian Salami.....	16
Cervelat.....	11
Frankfurts.....	7 1/4
Blood, Liver and Head Cheese.....	6
Tongue.....	9
Special Compressed Ham.....	8
Berliner Ham.....	8
Polish.....	7
Veal Ham.....	7
Pork Sausage.....	7 1/4 @ 8

VINEGAR PICKLE—COOKED MEATS.

Pigs' Feet, 1/4 bbl. 80 lb.....	\$3.00
Snouts, 1/4 bbl. 80 lb.....	5.30
Ox Hearts, 1/4 bbl. 80 lb.....	5.30
Plain Tripe, 1/4 bbl. 80 lb.....	2.40
H. C. Tripe, 1/4 bbl. 80 lb.....	4.50

DRESSED BEEF.

	Carcass.	Forcs.	Hinds
Fair Cows.....	6 1/4	5	7 1/4
Good Young Cows.....	7	5 1/4	8 1/4
Native Heifers.....	7 1/4 @ 8	6	9 1/4
Texas Steers.....	7 @ 7 1/4	5 1/4	9 1/4
Western Steers.....	7 1/4 @ 8	6 1/4	10
Native Steers.....	7 1/4 @ 8 1/4	6 1/4	11

BEEF CUTS.

	No. 1.	No. 2.	No.
Loins.....	15 @ 16	12 1/4	9
Short Loins.....	20	18	12
Ribs.....	14	12 1/4	6 1/4
Tenderloins.....			18
Chucks.....	6	5 1/4	4 1/4
Plates.....	4 1/4	4 1/4	3 1/4
Rounds.....	8	7	6
Rolls, boneless.....			8 @ 10
Shoulder Joints, boneless.....			6 @ 7
Rump Butts, boneless.....			4 1/4
Chucks, boneless.....			4 1/4
Strip Loins.....			5 1/4
Beef Ham Sets.....			8

BEEF SUNDRIES.

Cheek meat.....	4
Hanging Tenderloins.....	6 1/4
Flank Steak.....	7 @ 9
Trimming.....	4
Shanks.....	3 1/4
Flanks (rough).....	8
Brains.....	4
Kidneys.....	4
Beef Suet.....	5
Sweetbreads.....	25
Oxtails.....	3 1/4
Livers.....	4
Hearts.....	3
Tongues.....	11 1/4
Clean Tripe (reg.).....	3 1/4
Clean Tripe (H. C.).....	4

CALVES.

Carcass.....	7 @ 10
Forcs.....	5 @ 8
Hinds.....	9 @ 12
Sweetbreads.....	45c.
Livers.....	30c.

MUTTON.

Lambs (carcase).....	11 1/4 @ 12 1/4
Ewes (carcase).....	7 @ 8
Yearlings (carcase).....	9 @ 10
Wethers (carcase).....	8 @ 9
Mutton (racks).....	8 @ 9
Mutton, legs.....	@ 11
Mutton, breasts.....	@ 5 1/4
Mutton, stews.....	@ 5 1/4
Lamb (racks).....	9 @ 10
Lamb, loins.....	@ 16
Lamb, saddles.....	@ 16
Lamb, legs.....	@ 16
Lamb, tongue.....	12c. per lb.
Lamb, fries.....	5c. pair

PORK.

Dressed Hogs.....	7 1/4
Tenderloins.....	17
Pork Loins.....	8 1/4
Spare Ribs.....	6 1/4
Butts.....	6 1/4
Shoulders.....	6 1/4
Shoulders (skinned).....	6 1/4
Trimming.....	5
Pigs' Tails.....	2
Hearts (per pound).....	2
Leaf Lard.....	7 1/4
Heads (rough).....	3 1/4
Heads (cleaned).....	3 1/4
Hocks.....	4 1/4
Cheek Meat.....	3 1/4
Neck Bones.....	1 1/4
Backfat.....	7
Plux (per lb).....	3
Kidneys (per lb).....	2
Pigs' Feet (rough).....	2
Pigs' Feet (cleaned).....	2 1/4
Brains (per lb).....	3
Snouts and Ears.....	3
Tongues.....	9 1/4

BUTCHERS' OFFAL.

Tallow.....	4c.
Mixed Bone and Tallow.....	2 1/4 per lb.
Calfskins, 8 to 15 lb.....	10 1/4 @ 11
Calfskins, under 8 lb.....	60c. each

NEW YORK CITY

LIVE CATTLE.

WEEKLY RECEIPTS TO FEB. 29.

	Bees.	Cows.	Calves.	Sheep.	Hogs.
Jersey City	2,477	673	11,836	14,172	
Sixtieth Street ..	220	60	1,628	7,061	
Fortieth Street ..					16,377
Lehigh Valley ..	5,095				3,325
Weehawken	1,126		1,582		
Scattering	260	65	58	37	
Totals	9,178	125	2,350	21,116	34,874
Totals last week..	9,505	121	3,308	23,769	42,794

WEEKLY EXPORTS.

	Live cattle.	Live sheep.	Qrs. of beef.
Schwarzschild & S., s. s. Cevic.	445	...	...
Schwarzschild & S., s. s. Minne-	405	...	1,700
Schwarzschild & S., s. s. Con-	385	...	...
Schwarzschild & S., s. s. Phil-	...	...	1,000
J. Shamberg & Son, s. s. Cevic.	450	1,582	...
J. Shamberg & Son, s. s. Minne-	405	...	...
J. Shamberg & Son, s. s. Con-	235	...	...
Swift Beef Co., s. s. Cedric.	...	...	1,200
Morris Beef Co., s. s. Cevic.	...	...	2,400
Morris Beef Co., s. s. Cedric.	...	...	2,400
Morris Beef Co., s. s. Philadel-	...	...	1,000
Armour & Co., s. s. Cedric.	...	...	500
Armour & Co., s. s. Philadelphia	...	...	1,000
G. H. Hammond Co., s. s. Cevic	...	...	2,400
Cudahy Packing Co., s. s. Cam-	...	...	1,900
pania	46	30	...
Miscellaneous, s. s. Pretoria.	...	...	12
L. S. Dillenback, s. s. Caribbee.	...	...	...
Totals	2,371	1,624	15,400
Total exports this week	2,535	2,314	16,506
Boston exports this week	2,141	2,680	10,900
Baltimore exports this week	940	2,127	...
Philadelphia exports this week ..	802	540	1,200
Portland exports this week	1,244	1,423	...
St. John exports this week	1,901	782	...
To London	3,040	1,376	5,700
To Liverpool	4,351	5,812	18,900
To Glasgow	308	...	...
To Bristol	400	746	...
To Manchester	500	...	...
To Hull	150	...	...
To Antwerp	400	600	...
To Cardiff	204	600	...
To Southampton .....	...	...	3,000
To Bermuda and West Indies..	46	42	...
Totals to all ports	9,399	9,176	27,500
Totals to all ports last week	10,061	10,116	31,406

QUOTATIONS FOR BEEVES.

Good to choice native steers.....	45	@45.40
Medium to fair native steers.....	4.25	@4.90
Poor to ordinary native steers.....	3.85	@4.15
Oxen and stags.....	2.75	@4.85
Bulls and dry cows.....	1.90	@4.40
Good to choice native steers one year ago. 5	@	5.45

LIVE CALVES.

Live veal calves, a few selected.....	100 lb	7 1/4 @ 8 1/4
Live veal calves, good to prime.....	100 lb	7 @ 8

LIVE HOGS.

Hogs, heavy weights (per 100 lbs.).....	5.65	@6.10
Hogs, medium.....	5.00	@6.10
Hogs, light to medium.....	6.00	@6.10
Pigs.....	6.10	@6.30
Roughs.....	5.10	@5.30

LIVE SHEEP AND LAMBS.

Spring lambs, selected.....	per lb	4 1/4
Spring lambs, good to choice.....	per lb	4
Spring lambs, culls.....	per lb	3 1/4
Sheep, selected.....	per 100 lb	5
Sheep, medium to good.....	per 100 lb	4
Sheep, culls.....	per 100 lb	3

DRESSED BEEF.

CITY DRESSED.

Choice native, heavy.....	5 1/4	@ 5 1/4
Choice native, light.....	7 1/4	@ 5 1/4
Common to fair, native.....	6 1/4	@ 7 1/4

WESTERN DRESSED BEEF.

Choice native, heavy.....	7 1/4	@ 8
Choice native, light.....	7 1/4	@ 7 1/4
Native, com. to fair.....	6 1/4	@ 7
Choice Western, heavy.....	6 1/4	@ 7 1/4
Choice Western, light.....	6 1/4	@ 6 1/4
Common to fair, Texan.....	5	@ 6
Good to choice heifers.....	7	@ 7 1/4
Common to fair heifers.....	6	@ 6 1/4
Choice cows.....	6 1/4	@ 6 1/4
Common to fair cows.....	5	@ 6 1/4
Good to choice oxen and stags.....	6 1/4	@ 6 1/4
Common to fair oxen and stags.....	5 1/4	@ 6
Fleshy Bologna bulls.....	5	@ 5 1/4
Kresh pork loins, Western.....	8	@ 11

DRESSED CALVES.

Veals, city dressed, prime, per lb.....	8	@14
Veals, good to choice, per lb.....	7 1/4	@13 1/4
Calves, country dressed, prime, per lb.....	10	@2 1/4
Calves, country dressed, fair to good.....	8	@1
Calves, country dressed, common.....	7 1/4	@1

DRESSED HOGS.

Pigs.....	7 1/4	@ 6 1/4
Hogs, heavy.....	6 1/4	@ 7 1/4
Hogs, 180 lb.....	7 1/4	@ 7 1/4
Hogs, 160 lb.....	7 1/4	@ 7 1/4
Hogs, 140 lb.....	7 1/4	@ 7 1/4

DRESSED SHEEP AND LAMBS.

Spring lambs, choice.....	per lb	@ 10
Spring lambs, good.....	per lb	@ 9 1/4
Spring lambs, culls.....	per lb	@ 8 1/4
Sheep, choice.....	per lb	@ 7 1/4
Sheep, medium to good.....	per lb	@ 7
Sheep, culls.....	per lb	@ 6

PROVISIONS.

(Jobbing Trade)

Smoked hams, 10 lb average.....	@ 12
Smoked hams, 12 to 14 lb average.....	@ 11 1/4
Smoked hams, heavy.....	@ 11 1/4
California hams, smoked, light.....	@ 8 1/4
California hams, smoked, heavy.....	@ 8
Smoked bacon, boneless.....	@ 12 1/4
Smoked bacon (rib in).....	@ 12
Dried beef sets.....	@ 13
Smoked beef tongues, per lb.....	@ 15
Smoked shoulders.....	@ 7 1/4
Pickled bellies, heavy.....	@ 7 1/4

BONES, HOOFS, HAIR AND HORNS.

Round shin bones, av. 50-60 lb cut, per 100 bones, per 2,000 lb.....	\$55.00
Flat shin bones, av. 40-45 lb cut, per 100 bones, per 2,000 lb.....	40.00
Thigh bones, av. 90-95 lb cut, per 100 bones, per 2,000 lb.....	75.00
Horns.....	15.00
Horns, 7 1/2 oz. and over, steers, first quality.....	270 @ 280

BUTCHERS' SUNDRIES.

Fresh steer tongues.....	50c to 75c a piece
Fresh Cow Tongues.....	35c to 50c a piece
Calves' head, scalded.....	30c to 40c a piece
Sweet breads, veal.....	25c to 75c a pair
Sweet breads, beef.....	15c to 18c a lb
Calves' liver.....	25c to 50c a piece
Beef kidneys.....	7c to 12c a piece
Mutton kidneys.....	14c to 24c a piece
Livers, beef.....	4c to 5c a lb
Oxtails.....	5c to 7c a piece
Hearts, beef.....	10c to 15c a piece
Rolls, beef.....	10c to 12c a lb
Tenderloin beef, Western.....	15c to 25c a lb
Lambs' fries.....	10c to 12c a pair
Fresh pork loins, city.....	10 1/4 @ 11
Fresh pork loins, Western.....	8 @ 8 1/4

BUTCHERS' FAT.

Ordinary shop fat.....	@ 2 1/4
Suet, fresh and heavy.....	@ 4
Shop bones, per cwt.....	@ 25

PICKLED SHEEPSKINS.

XXX sheep, per dozen.....	@ 55.75
XX sheep, per dozen.....	@ 4.50
X sheep, per dozen.....	@ 3.75
Blind Ribby sheep.....	@ 3.75
Sheep, ribby.....	@ 3.12 1/2
XX lambs, per dozen.....	@ 4.50
X lambs, per dozen.....	@ 3.50
No. 1 lambs, per dozen.....	@ 3.00
No. 2 lambs, per dozen.....	@ 2.50
Culls, lambs.....	@ 75

SAUSAGE CASINGS.

Sheep, imp., wide, per bundle.....	80
Sheep, imp., wide, per keg, 50 bundles.....	\$40.00
Sheep, imp., medium, per bundle.....	44
Sheep, imp., per bundle, narrow.....	44
Sheep, imp., Russian Rings.....	42
Hog, American, in tea, or bble, per lb, F.O.B.....	42
Hog, American, kegs, per lb, F.O.B.....	42
Beef, rounds, per set, f. o. b. Chicago.....	12
Beef, rounds, per set, f. o. b. N. Y.....	13

Beef, rounds, per lb.....	2
Beef, bungs, piece, f. o. b. N. Y.....	8
Beef, bungs, per lb.....	38
Beef, middles, per set, f. o. b. Chicago.....	37
Beef, middles, per set, f. o. b. N. Y.....	@ 6
Beef, middles, per lb.....	@ 6 1/4
Beef wassanda, per 1,000, No. 1's.....	24 @ 3
Beef wassanda, per 1,000, No. 2's.....	24 @ 3

SPICES.

	Whole.	Ground
Pepper, Sing., white.....	21	22
Pepper, Sing., black.....	14	15
Pepper, Penang, white.....	20 1/4	21 1/4
Pepper, red, Zanzibar.....	15	21
Pepper, shot.....	15	...
Allspice.....	09 1/4	12
Coriander.....	06	07
Cloves.....	20	20
Mace.....	55	60

SALTPETRE.

Crude.....	34 @ 34 1/2
Refined—Granulated.....	44 @ 44 1/2
Crystals.....	44 @ 44 1/2
Powdered.....	44 @ 44 1/2

THE GLUE MARKET.

A extra.....	21
1 extra.....	17
1.....	16
IX moulding.....	15
IX.....	14 1/4
IX.....	14
IX.....	13
IX.....	11
IX.....	10
IX.....	9
IX.....	9

GREEN CALFSKINS.

No. 1 calfskins.....	per lb	.14
No. 1 calfskins, buttermilk.....	per lb	.13
No. 1 calfskins, 12-14.....	each	1.50
No. 2 calfskins, buttermilk.....	per lb	.10
No. 2 calfskins, 12 1/2-14 lb.....	piece	1.80
No. 1 grassers.....	per lb	.12
No. 2 grassers.....	per lb	.09
No. 1 heavy kips, 18 lb and up.....	piece	1.90
Ticky kips, 18 lb and up.....	piece	1.40
No. 2 heavy kips, 18 lb and up.....	piece	1.65
No. 1 kips, 14-18 lb.....	piece	1.70
No. 2 kips, 14-18 lb.....	piece	1.50
No. 1 grass kips.....	piece	1.50
No. 2 grass kips.....	piece	1.25
Ticky kips.....	piece	1.00
Branded heavy kips.....	piece	1.10
Branded kips.....	piece	.90
Branded skins.....	piece	.50

GAME.

DRY-PACKED.

Snipe, English, per dozen.....	1.75 @ 2.00
Plover, Golden, per dozen.....	2.50 @ 3.00
Grass, per dozen.....	1.75 @ 2.00
Rabbits—Prime cotton tails, per pair.....	12 @ 14
Small and inferior, per pair.....	8 @ 10

DRESSED POULTRY.

FRESH KILLED.

Turkeys—West'n, young hens, selected.....	@ 19
W'n, young toms, medium weights, selected.....	17 1/4 @ 18
W'n, young toms, heavy weights.....	@ 17
W'n, young hens & toms, selected.....	@ 18
Western, mixed, fair to prime.....	15
Old hens.....	@ 15 1/4
Common.....	12
Capons—Philadelphia, large.....	22 @ 23
Philadelphia, medium weights.....	18 @ 20
Ohio and Indiana, large.....	@ 18
Mixed.....	15 @ 17
Small and Sligs.....	13 @ 14
Broilers, Phila., 4 lb. and under to pair, fancy.....	33 @ 35
Pa., 4 lb. and under to pair, fancy.....	23 @ 25
Western, dry-picked, 4 lb. and under to pair, fancy.....	20 @ 25
Chicken—Phila., 1cy, large, per lb.....	18 @ 19
Phila., mixed sizes, per lb.....	15 @ 17
State and Pa., fancy, per lb.....	15 @ 16
State and Pa., med. sizes, per lb.....	13 @ 14
State and Pa., poor, per lb.....	11 @ 12
Western, dry-picked, large, per lb.....	14 @ 14 1/4
Western, scalded, large, per lb.....	14 @ 14 1/4
Western, dry-picked and scalded, medium sizes.....	12 1/4 @ 13 1/4
Fowls—Ohio & Mich., scalded, per lb.....	12 1/2 @ 13 1/2
Western, inferior.....	@ 11 1/4
Squabs—Prime, large, white, per doz.....	23.25
Mixer, per doz.....	2.50 @ 2.75
Dark, per doz.....	1.75 @ 2.00
Fowls and chickens, poor, per lb.....	10 @ 11 1/4
Old cocks, per lb.....	15 @ 16
Spring Ducks—Jersey, Pa. & Va.....	15 @ 16
Western, large, fancy, per lb.....	13 @ 14
Western inferior, per lb.....	9 @ 11

LIVE POULTRY.

Spring chickens, nearby, per lb.....	@ 12
Fowls, per lb.....	@ 13 1/4
Roosters, per lb.....	@ 8 1/2
Turkeys, per lb.....	@ 15
Ducks, average Western, per pair.....	50 @ 60
Geese, Western, per pair.....	1.50 @ 1.62
Live Pigeons, per pair.....	@ 35

FERTILIZER MARKETS.

BASIS, NEW YORK DELIVERY.		
Bone meal, steamed, per ton.....	\$22.00	@23.00
Bone meal, raw, per ton.....	\$25.50	@26.50
Nitrate of soda—future.....	2.05	@ 2.07 1/2
Nitrate of soda—spot.....	2.15	@ 2.25
Bone black, spot, per ton.....	13.50 ch.	@14.00
Dried blood, N. Y., 12-18 per cent. ammonia.....	2.55	@ 2.60
Dried blood, West, high grade, fine ground, c. f., N. Y.....	2.85	@ 2.90
Tankage, 9 and 20 p. c., f. o. b. Chicago.....	22.00	@23.00
Tankage, 9 and 20 p. c., f. o. b. Chicago.....	18.00	@19.00
Tankage, 7 and 30 p. c., f. o. b. Chicago.....	15.00	@16.00
Tankage, 6 and 35 p. c., f. o. b. Chicago.....	15.00	@16.00
Garbage tankage, f. o. b. New York.....	8.00	@ 9.00
Fish scrap, dried, 11 p. c. ammonia and 15 p. c. bone phosphate.....	29.00	@30.00
Wet, acidulated, 6 p. c. ammonia, per ton.....	14.00	@15.00
Asotline, per unit, del. New York.....	2.60	@ 2.65
Sulphate ammonia gas, for shipment, per 100 lbs.....	3.20	@ 3.25
Sulphate ammonia gas, per 100 lbs., spot.....	3.10	@ 3.20
So. Carolina phosphate rock, ground, per 2,000 lbs., f. o. b. Charleston.....	6.50	@ 7.75
So. Carolina phosphate rock, undried, f. o. b. Ashley River, per 2,400 lbs.....	3.50	@ 3.75
The same, dried.....	3.75	@ 4.00
POTASHES, ACCORDING TO QUANTITY.		
Kainit, shipment, per 2,400 lbs.....	\$5.95	@ 6.50
Kainit, ex-store, in bulk.....	9.60	@10.65
Kieserit, future shipment, to arrive, per 2,400 lbs., ex-store.....	7.00	@ 7.25
Muriate potash, 80 p. c., future shipment.....	1.80	@ 1.90
Double manure salt (40/40 p. c., less than 2 1/2 p. c. chloride), to arrive, per lb. (basis 48 p. c.).....	1.00	@ 1.12
Sulphate potash, to arrive (basis 90 p. c.).....	2.08	@ 2.28
Sylvinit, 24 to 36 p. c., per unit, S. P.....	.30	@ .40

OCEAN FREIGHT.

	Liverpool.	Glasgow.	Hamburg.
	Per Ton.	Per Ton.	Per 100
Canned meats.....	7/6	12/6	16c
Oil cake.....	7/6	8/	12c
Bacon.....	7/6	12/6	16c
Lard, tierces.....	7/6	12/6	16c
Cheese.....	30/	25/	2 M
Butter.....	25/	30/	2 M
Tallow.....	7/6	15/	16c
Beef, per tierce.....	1/6	3/4	18c
Pork, per bbl.....	1/1	2/0	16c

EXPORTS OF PROVISIONS

Exports of hog products from Atlantic ports for week ending Feb. 27, with comparative tables:

	Week Feb. 27, 1904.	Week Feb. 28, 1903.	Nov. 1, 1903, to Feb. 27, 1904.
United Kingdom ..	1,002	206	15,838
Continent ..	243	832	6,710
So. and Cen. Am..	633	1,021	7,251
West Indies ..	917	962	20,786
Br. No. Am. Col..	1,218	....	3,966
Other countries ..	59	20	1,418
Totals ..	4,052	2,943	55,969

BACON AND HAMS, POUNDS.

	United Kingdom ..	Continent ..	So. and Cen. Am..	West Indies ..	Br. No. Am. Col..	Other countries ..
Totals ..	10,307,785	2,040,596	61,750	250,225	18,175	12,683,831

LARD, POUNDS.

	United Kingdom ..	Continent ..	So. and Cen. Am..	West Indies ..	Br. No. Am. Col..	Other countries ..
Totals ..	5,215,837	4,433,361	187,515	28,250	2,920	10,458,263

RECAPITULATION OF WEEK'S EXPORTS.

	Pork, bbls.	Bacon and Ham, lbs.	Lard, lbs.
New York ..	3,854	4,859,900	5,294,390
Boston ..	100	3,396,225	1,763,197
Portland, Me. ....	....	2,578,350	175,000
Philadelphia ..	....	48,900	235,060
Baltimore ..	....	608,371	1,435,041
Mobile, Ala. ....	....	84,800	66,400
New Orleans ..	38	33,550	1,210,675
Newport News ..	....	2,010	....
St. John, N. B. ....	....	901,725	278,500
Totals ..	4,052	12,683,831	10,458,263

COMPARATIVE SUMMARY.

	Nov. 1, 1903, to Feb. 27, 1904.	Nov. 1, 1902, to Feb. 28, 1903.	Increase.
Pork, pounds ..	11,193,900	10,611,200	582,900
Bacon & hams, lbs.	214,910,822	218,521,832	....
Lard, lbs ..	229,382,769	222,068,146	7,296,623

GENERAL MARKETS

LARD IN NEW YORK.

Western steam nominally 7.35; city steam, 6.75@7.00; refined, Continent, tcs., 7.75; do, South America, tcs., 8.50; do., kegs, 9.50; compounds, 7.

HOG MARKETS, MARCH 4.

CHICAGO. — Receipts, 18,000; slow; weak; \$4.70@5.60.

KANSAS CITY.—Receipts, 5,000; weak; \$5@5.37 1/2.

OMAHA.—Receipts, 6,000; slow; weak; \$4.75@5.30.

INDIANAPOLIS. — Receipts, 3,500; higher; \$5.25@5.75.

CLEVELAND.—Receipts, 20 cars; active; about steady; \$5.55@5.75.

EAST BUFFALO.—Receipts, 20 cars; 10 @20c. higher; \$5.15@5.85.

LIVERPOOL.

Liverpool, March 4.—Beef—Extra mess, 67s. 6d. Pork, prime mess, Western, 67s. 6d. Hams—Sugar cured, 47s. 6d.; short ribs, 39s. 6d.; long clear middles, light, 39s. 6d.; long middles, heavy, 39s.; short clear, 39s.; clear, bellies, 44s.; shoulders, square, 11 to 13 lbs., 35s. Lard—Prime Western, in tcs, 37s. 6d.; American refined, in pails, 37s. 9d. Cheese—American, finest colored, 51s. Tallow—Prime city, 25s. Turpentine, 43s. 6d. Cottonseed oil (Hull), 19s. 7 1/2d. Rosin, common, 7s. 6d. Linseed oil (London), 17s. 5 1/4d. Refined petroleum, 7 1/2d.

OLEO AND NEUTRAL LARD.

So far this week the oleo market has been very quiet, no sales being reported from Rotterdam. It looks as though we would have a slight reaction in the price of oleo.

For the first time in months, neutral lard is held below the price of choice oleo, and in time this is bound to affect the consumption of this article. At the moment, however, the demand is very slack. The packers are willing to make considerable concession in price in order to bring about business.

Cotton oil continues in a strong position, and high prices are bound to be the rule until the new crop comes in next fall. Choice grades are exceedingly scarce and hard to get.

Rotterdam, Feb. 20.—Oleo oil market closes firm. Total sales about 5,804 tcs. American oleo and stock, against about 4,071 tcs. during same period in 1903 and against about 4,252 tcs. last week. Total arrivals for the week, 4,466 tcs. Total arrivals from America this year, 25,652 tcs.; same period in 1903, 19,620 tcs. Expected total about 5,596 tcs.

Present stocks American oleo and stock about 6,156 tcs., against about 3,644 tcs. same time last year. Imports of margarine (butterine) in England amounted last year in week ending February 13, to 18,880 cwt., against 16,392 cwt. during about same period in 1903.

Neutral lard firm, choice brands offering on shipment at prices varying from 50 1/2 to 53 1/4 fl., and backfat neutral lard from 47 to 49 1/4 fl.

Cottonseed oil firm but quiet; strictly choice butter oil can be bought at 32 1/2 @ 31 1/4 fl., and prime summer yellow at 31 @ 30 1/2 fl. Arrivals this week of American cotton oil amount to about 80 bbls.

FRIDAY'S CLOSINGS.

Provisions.

The markets opened better. There was soon an advance of 10 points for pork, 10 points for lard and 7 points for ribs. Wheat was then up 2 and corn 1. There was a good deal of feverishness all around and very soon another decline in prices came about all around, with pork, in a few minutes 40c. lower, and moderate changes otherwise. An erratic condition of affairs ran along with frequent fluctuations and firmer prices for lard. It is clear that the "long" interest is not fully shaken out, however largely it has been worked against in the last few days, and that a substantial market is not probable at once.

Cottonseed Oil.

The market is rather slack and somewhat easier in some directions for crude, but more especially where there are small lots on offer, for which there is a disinclination to pay over 32 1/2c., although 33c. and even more money is asked. The New York market has hardly changed further; 40c. bid for May and 40 1/4c. asked; April at about 40c. Some of the mills which have already closed for the season, covering the Southeast as well as other sections, are not likely to open again, as having little hope of getting much surplus seed from planting. But the extent of the seed that will be left over from planting cannot, of course, be determined, and there are variable opinions concerning it. It is a fair inference that planting will be done much more freely than usual.

Tallow.

No sales of city, hhds., as yet over 5 1/4c. Refusals were given of 200 hhds. to shippers at 5 1/2c. Market held firmly, and features essentially unchanged from those in our weekly review in another column. Weekly contract deliveries of city, hhds., made at 5 1/4c.

Oleo Stearine.

Quiet; 7 1/4c. bid, 7 1/2c. asked.

CHEMICALS AND SOAPMAKERS' SUPPLIES.

74% Caustic Soda at \$1.80 to \$1.85 for 60%.
70% Caustic Soda at \$1.85 to \$1.90 for 60%.
60% Caustic Soda at 2c. per lb.
98% Powdered Caustic Soda at 3c. per lb.
58% Pure Alkali at 90c. to \$1 for %
48% Carbonate Soda Ash at \$1.10 per 100 lbs.
Borax at 8c. per lb.
Talc at 2 1/4c. per lb.
Palm Oil in casks 6 1/4c. lb., in barrels 6 1/4c. lb.
Green Olive Oil at 57c. to 58c. per gal.
Yellow Olive Oil at 54c. per gal.
Green Olive Oil Foots at 5 1/2c. lb.
Cochin Coconut Oil 7 1/4c. to 7 1/2c. lb.
Ceylon Coconut Oil 6 1/4c. to 7c. lb.
Cottonseed Oil at 40c. to 41c. per gal.
Rosin: M., \$4; N., \$4.25; WG., \$4.50; WW., \$4.75 per 280 lbs.

SMOKING EELS.

Eels may be smoked on a small scale by hanging them in a bottomless barrel, raising the latter about 2 1/2 feet above the ground and starting below a small fire, which must, however, be kept from burning with an open flame. Green wood is well suited to generate the smoke.

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closed dull and nominal. New York quotes: Choice, 8 1/4c.; prime, 7 1/4c.; low grade, 5 1/4c.

COTTONSEED STEARINE.—Quoted at nominal.

LARD OIL.—Shows some irregularity on the variable lard market. Demands are for small lots. Prime quoted at about 64@65c.

RETAIL DEPARTMENT

A RADICAL REMEDY.

A rather startling meat-stealing story comes from St. Stephen's, a town in southern Alabama. It seems that Thomas Perkins, a farmer living near St. Stephen's, in South Alabama, put a lot of rough on rats on hog meat in his smokehouse, negro thieves in the community having made him, desperate by their constant pilfering. The poisoned meat was placed where it was most convenient for the thieves. They got it. Since that time eight negroes in the neighborhood have died after great suffering, and more are ill. Among the dead are "Jerry" Sanders and his wife, two of the most respectable and honest among the negroes of the community. Some of the stolen meat was sold to them by the thieves. One entire family of negroes was wiped out from the father, a notorious thief, down to the baby child.

SUNDAY CLOSING IN LONDON.

Reports show that of late years there has been a marked increase of Sunday trading in London and the principal large English towns. The board of management of the British Early Closing Association have, therefore, addressed a statement to the London County Council, asking for its co-operation in arresting these growing evils. The board state that neither effort nor expense will be spared to pass a Sunday-closing bill at this session of Parliament, which has been specially drafted, and will be introduced by their president, Lord Avebury, supported by the Archbishop of Canterbury and their chairman, Cameron Corbett, M. P. With a view to overcome the objection that the board's claim is not an impartial statement, the board are asking the County Council to order an investigation showing the extent of Sunday selling in the metropolitan area. This, it is urged, will conclusively show the enormous amount of Sunday trading now carried on in London alone.

A DISTINCTION IN GIVING CREDIT.

There is a meat dealer in Indianapolis who should become the most popular in the city, at least among the people who need to ask credit at the shop. This man, named Gemmer, proprietor of a market on Virginia avenue, Indianapolis, has a remarkable plan for distinguishing between "dead beats" and deserving credit customers, which is commendable in its intent, even if impractical in its methods. He believes there are many deserving poor who are refused credit because of the number of shameless "grafters" who by cunning schemes, make their living from the labor of other people.

"There's always a way to stop such grafting, and give the honest poor man a chance to get food and fuel when he is in hard luck," says Gemmer. "I have studied the question closely and I have come to the conclusion that there must be about 5,000,000 people in the United States, counting the children of the grafters, of course, who do not pay for what they get if they can possibly avoid doing so. My way of remedying the evil would be this: When a man comes to a

merchant and ask him for credit, let him sign a note for the amount of the value of the goods purchased. In a certain time, if he does not pay, let his creditor present the note to the city. The city will then pay the amount of the note to the creditor, thus making the man indebted to the city, and make the indebted man work on the streets until he pays out the amount of his indebtedness.

"This plan would, in my opinion, give better sanitary conditions. It would put men in a position where they must pay. Goods, then, would not have to be sold to honest people at a price which would make a profit over the loss of these dishonest men. Every man could get credit."

HOG HAS HIS SHARE OF TEETH.

The hog, curiously enough, has more teeth than any other farm animal. When it has got its set complete the hog possesses in all forty-four teeth, says a writer in the "Record-Herald." The horse has forty teeth, while cattle and sheep have only thirty-two teeth each. The forty-four teeth of the hog consist of six incisors, two canine, eight remolar and six molar teeth in each jaw. Another peculiar feature about the dentition of the hog is that, while the incisors or front teeth in the upper jaw bear a close resemblance to those of the horse, the corresponding teeth in the lower jaw closely resemble those of a dog.

It is also worthy of note that the molars of a hog gradually increase in size from the front to the rear, the most backward of these grinders being ever so many times larger than those in front. The teeth of an ox are thirty-two in number, twenty-four being molars and eight incisors. The ox has no incisors in the upper jaw.

The periods of dentition are as follows: The central incisors and first laterals before or some days after birth, second laterals fourteen days after birth, comers two to three weeks. The first, second and third molars appear before or some days after birth. Fourth molars at 6 to 9 months of age, fifth at 2½ years; sixth, 4 to 5 years. The central incisors are replaced at about 1½ years; first laterals, 2½ years; second laterals, 3½ years; comers, 4 years. The second set of first molars comes at 1½ years; second molars, 2½ years; third, 3½ years; the fourth, fifth and sixth molars are not replaced. From the above the age of the cow and calf can be determined, but as the cow grows older it is impossible to determine the exact age.

GOOD THING FOR LOCAL BUTCHERS.

On the occasion of the recent marriage of the Duke of Norfolk the Arundel town council, at the Duke's direction, made a gift of several pounds of beef and mutton to every resident of the borough who was worth less than \$100—that is to say, the poor of the town. It was stipulated that the butchers must be paid at least 20 cents per pound for the meat, and that it must be bought at shops which sold English meat only.

LOCAL AND PERSONAL

C. Hess has opened a market at Constantia, N. Y.

Butcher & Bross will open a new market at Girard, Ill.

E. B. Strohecker has closed out his meat business at Reading, Pa.

B. F. Seip, of Cameron, Mo., has opened a new market at Emporia, Kas.

Herman Egolf's market at Carlisle, Pa., was destroyed by fire last week.

A. Treholm has opened a market in the Arcade building at Blackstone, R. I.

Wm. Priestman has sold his market at Shenandoah, Ia., to Hand & Pfennig.

Bixler & Dyer have opened a market at No. 331 West Spruce street, Shamokin, Pa.

E. M. Gassert, Myerstown, Pa., has entered the meat business at that place on a large scale.

The market of C. A. Seitz, Etna, Pa., was destroyed by fire last week, along with other buildings in the neighborhood.

Seeger Bros., sausage makers at Lebanon, Pa., have begun the erection of an extensive plant at Avon, and will manufacture other meats.

The butchers' organization at Danville, Ill., is prosecuting dealers who persist in remaining open on Sunday, contrary to the city ordinance.

Fred. Ruether has sold his market at North Adams, Mass., to Ruether & Pattison, and will engage entirely in the wholesale end of the business.

The retail market men of Wisconsin are agitating the formation of a state association, and a meeting will be held at Superior next week for that purpose.

The handsome new plant of the Hammond Beef Co., at Auburn, N. Y., was formally opened last week, several dozen dealers from the surrounding territory being present.

Nathan S. Plumb, a butcher at Hartford, Conn., lost his right arm by amputation last week, as a result of blood poisoning, caused by a scratch from the spur of a dressed fowl he was handling.

Levi W. Hollis' market at Camden, Del., was destroyed by fire on Monday, along with the town hall and other buildings, as a result of a blaze started by bank robbers in attempting to blow up a safe.

The state labor commissioner of Minnesota has taken it upon himself to see to the enforcement of the Sunday closing law recently declared valid by the Supreme Court as regards grocery stores and butcher shops, though tobacco and drug stores are allowed to remain open.

The North Side Butchers and Grocers Association of Chicago, has refused to renew its agreements with labor unions, and will have nothing to do with them henceforth. This is part of the concerted movement among Chicago employers to do away with union abuses which have caused so much business loss in that city in recent years.

Arnold Bros. have opened a new market at Keyser, W. Va.

A. J. Brown's market at Walden, N. Y., was gutted by fire last week.

Herbert Gabriel has bought H. M. Hayman's market at Goshen, Ind.

An up-to-date meat department will be added to the big Potter store at Sussex, N. J.

TO PLEASE CUSTOMERS.

The most important thing in the management of a store is prompt, polite and cheerful help, and it is more so now than it was some years ago, for to-day there is a competitor on almost every corner. A dealer should be able to control a great deal of his trade by being polite, careful and cheerful to his customers. The more trade he controls the more valuable he is; not that he should give them favors that are against the rules, but there is a great deal in how he pleases customers. Have a pleasant word for every person who comes into the store, let it be a man or woman, black or white, citizen or alien. When you have to refund money to a customer, refund it with good grace. Better to give her the money back with a smile than a frown. When you find fault with a customer for asking for her money and then give it to her you are not pleasing that customer any better than if you refused her altogether; therefore, the 10 cents or 15 cents you handed back are really lost.

SALARY IS NOT EVERYTHING.

A boy or man who works simply for his salary and is actuated by no higher motive is dishonest, and the one whom he most defrauds is himself, says "Success." He is cheating himself, in the quality of his daily work, of that which all the after years, try as he may, can never give him back. If I were allowed but one utterance on this subject, so vital to every young man starting on the journey of life, I would say: "Don't think too much of the amount of salary your employer gives you at the start. Think, rather, of the possible salary you can give yourself in increasing your skill, in expanding your experience, in enlarging and ennobling yourself." A man's or a boy's work is material with which to build character and manhood. It is life's school for practical training of the faculties, stretching the mind and strengthening and developing the intellect, not a mere mill for grinding out a salary of dollars and cents.

SUGGESTIONS FOR THE SHOW WINDOW.

Whoever thinks that a neglected show window is not frequently the cause of failure is mightily in error, and yet there is scarcely another trade sinning in this particular direction as much as does the butcher trade. A tidy, well-selected layout in the window is always a trade bringer, as no housekeeper is likely to pass it by. It is the force of habit which will make her stop and reflect on how nice the inside of the shop must look judged by attractiveness of the display.

Seasonable goods should be shown at the proper time, and not out of season. A good-

sized cake of clear ice will tell the onlooker of the freshness of the meat you sell. This may be arranged in a large variety of positions. Small bunches of greens displayed here and there will often tempt the stranger into the shop. You say the ice melts away, and the greens fade. Very well, but also does your business. Give the suggestion a fair trial.

CHARACTERISTICS OF SOUND MEAT.

The obvious characteristics of sound meat are that its color is red, neither pale pink nor deep purple; that it is marbled in appearance, firm and elastic to the touch, scarcely moistening the fingers, having a slight and not unpleasant odor, and that when exposed to the air for a day or two it should neither become dry on the surface nor wet and sodden. Sound meat is acid to litmus paper; unsound meat may be neutral or alkaline. Meat may be tainted with a physic administered to the animal. The effects of simple putridity are most varied. It is well known that some nations habitually eat putrid meat, and even prefer it to fresh; and the development of rottenness in eggs, for the epicure is an art in China. There is no doubt that habit has much to do with the tolerance by the stomach of putrid meat.

FACTS ABOUT AXLE GREASE.

Axle grease on the running gear of the delivery wagon represents an equivalent amount of bone-fat and energy supplied to aid the horse. When the axles run dry and the friction becomes greater from such fact the horse is, of course, the sufferer. Axle grease is an anti-friction medium, and its liberal application will make the horse laugh at overwork. It is cheaper than the digestive apparatus of the poor equus, which fact is occasionally proven to be true by the call of the veterinarians' collector.

SHEEP AS TRAVELERS.

There are said to be about ten million migratory sheep in Spain, which travel on occasions as much as two hundred miles from the plains to the mountains. They are known as transhumantes, and their march, resting-places, and behavior are governed by special regulations dating from the fourteenth century. At certain times no one may travel the same route as the sheep, which have the right to graze on all open and common land on the way.

FACTS ABOUT FLIES.

While out of season, it is always well to prepare for the future. That flies are a pest is nowhere more acknowledged than in the butcher shop. The fact that insect powder cannot be used in a well-conducted shop is to be regretted. The same is true in regard to poisonous fly-paper. That sticky fly-paper may be used in out-of-sight places is admitted; but don't display the glossy stuff in the show window. It always suggests lack of cleanliness. Good draughts of air from large fans not only drive the flies out, but often bring new customers in. Butchers in Paris tried rodim oil as a fly cure some years ago with varying results. The oil was painted all around the windows and doors. The smell of the oil, however, might not be agreeable to all customers.

A VEGETARIAN SALVATION.

The story is being printed in the daily press that Eugene Barney, of Vicksburg, Mich., has recently patented a preparation which is said to contain all the tenderness and delight of a juicy tenderloin, and yet not a piece of meat or drop of meat extract enters into its composition. The nature of the preparation, which is kept a secret by the inventor, is said to be entirely vegetable in its constituents and Mr. Barney says that he has submitted a quantity of the meat substitute to the state chemist. Frank E. Kedzie, of Lansing, Mich., and the latter has declared that he can find nothing whatever which might be regarded as harmful in the material, and, on the contrary, says its components seem to be entirely of a wholesome and nourishing nature.

DOGS IN THE BUTCHER SHOP.

Dogs are not allowed in German butcher shops, and the butchers there are even directed to so tell their customers. It certainly does not add to the attractiveness of the goods when dogs and cats are roaming at large in a shop. Cats may be allowable from the fact that the nature of the goods is a great temptation to mice and rats; but they should then not occupy such a prominence as they usually do. If your display for this week be rabbits or other small game, hide the cat to avoid suggestion. Dogs do not, as a rule, catch mice, and their protection is not needed in the shop, where some pretty dangerous weapons are in easy reach, should occasion require.

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